ACCESSION NR: AP4037291

in which P, O, and Al were consecutively bound; this was confirmed by the fact that phenetol, and not diphenyl or diethyl ether, was formed in the reaction between aluminum ethylate and diphenyl methylphosphonate. Polymer fusibility, glass transition temperature T_g, and solubility in organic solvents decreased with the increase in the degree of condensation. Thus, for poly(ethoxyaluminomethylphosphonate) in the initial degree of condensation, T_g was 90—100C, while in the progressed condensation stage, T_g was 130—150C; it is to be noted that T_g for poly(butoxyaluminomethylphosphonate) at a similar degree of condensation was 60—80C because of the steric hindrance of butoxy groups, which prevent close packing of polymeric chains. Orig. art. has: 1 figure and 7 formulas.

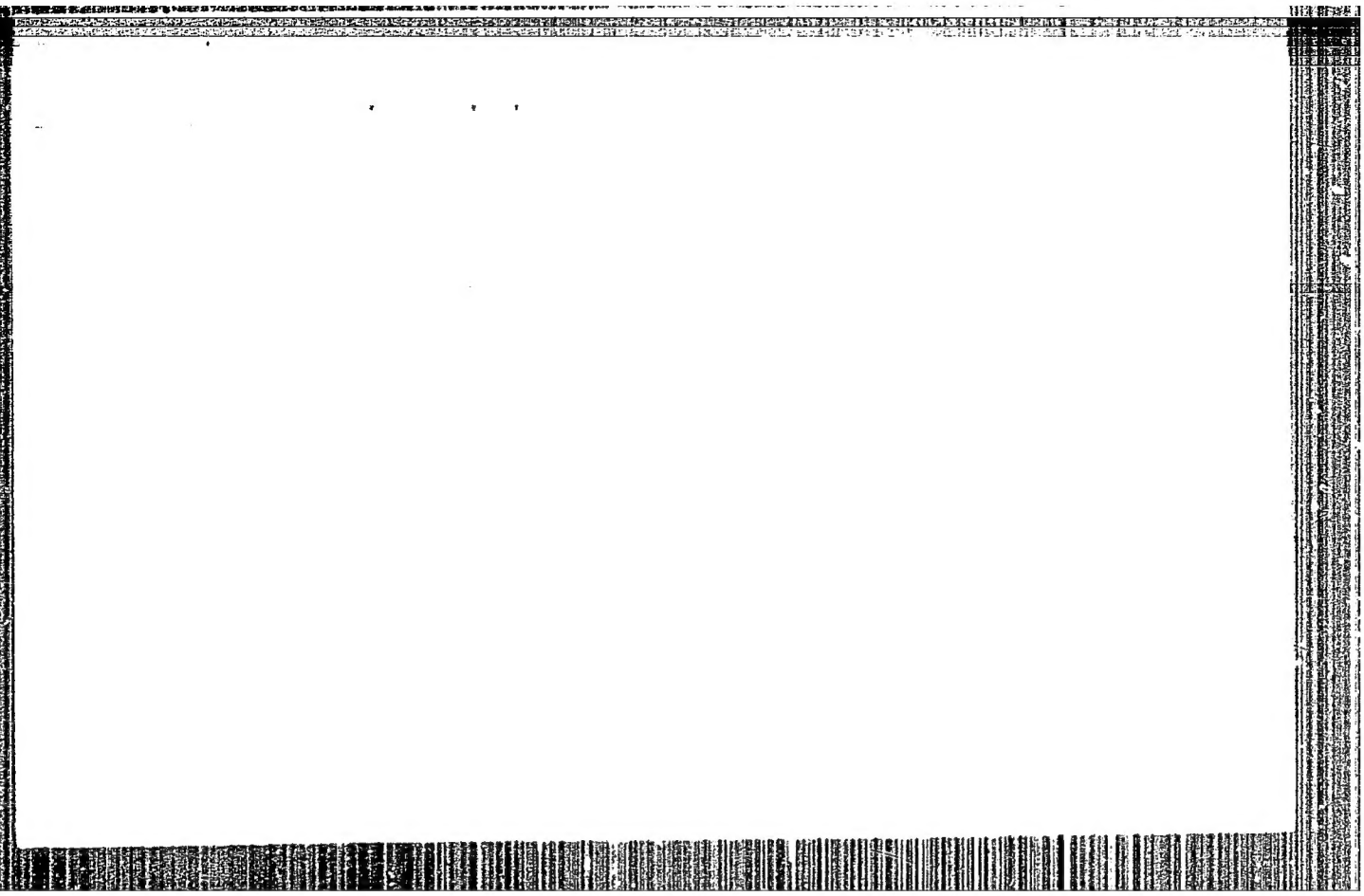
ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR (Institute of Organoelemental Compounds, AN SSSR)

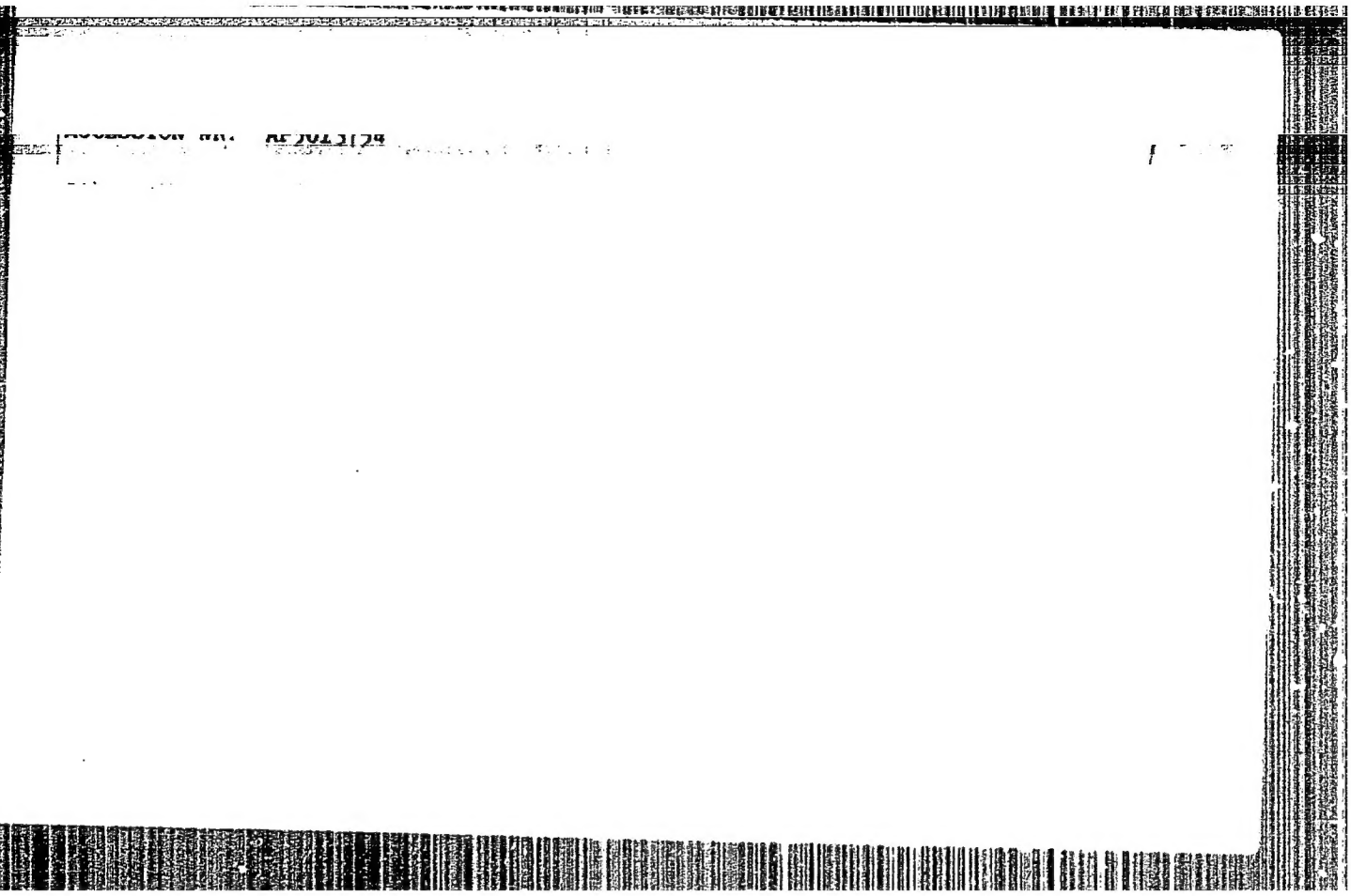
SUBMITTED: 02Jul63 DATE ACQ: 09Jun64 ENCL: 00

SUB CODE: OC NO REF SOV: 006 OTHER: 001

Card 3/3

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064610019-2"





L 14571-66 EWT(m)/EWP(j)/T WW/RM

ACC NR: AP6004390 (A) SOURCE CODE: UR/0020/66/166/003/0593/0594

AUTHOR: Andrianov, K. A. (Academician); Slonimskiy, G. L.; Kitaygorodskiy, A. I.; Zhdanov, A. A.; Belavtseva, Ye. M.; Levin, V. Yu.

ORG: Institute of Heteroorganic Compounds, Academy of Sciences SSSR (Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR)

TITLE: Morphological forms of high-elastic polymers

SOURCE: AN SSSR. Doklady v. 166, no. 3, 1966, 593-594

TOPIC TAGS: morphological form, high elastic polymer, silicone, polysiloxane

ABSTRACT: Recent studies of morphological forms in high-elastic polymers have disproved the older theory of high elasticity which is based on the idea of random entangled macromolecules. V. A. Kargin and associates (DAN, 144, 1089, 1962) have observed fibrillar structures in these polymers. In this study the morphological forms of high-elastic polymers have been studied with polyaluminodimethylsiloxanes (I) synthesized by polycondensation of aluminum butoxide with α, ω-dihydroxypolydimethylsiloxane. The morphological forms of I were investigated by electron microscopy. I was shown to have a globular structure with globular formations varying in size from 50—100 to over 1000Å. The small globules were, possibly, macromolecules. The large globular formations consisted of small globules which were either aggregated as a result of molecular interaction, or linked by chemical bonds formed in polycon-

Card 1/2 UDC: 541.68

L 14571-66

ACC NR: AP6004390

densation, or both. This globular structure, formed in two steps, is apparently one of the common morphological forms in amorphous polymers both in the high-elastic and the glassy (G. L. Slonimskiy, V. V. Korshak, et al. DAN,156, 924, 1964) states. The presence of globular and above-mentioned fibrillar morphological forms in high-elastic polymers raises the following problems: 1) fundamental review of the older theory of high elasticity; 2) studies of the effect of the morphological forms of amorphous polymers and their high-elastic and mechanical properties; 3) determination of the effect of the synthesis conditions and conditions for the formations of a solid or elastic body on the type of morphological forms produced. Orig. art. has: 1 figure.

[BO]

SUB CODE: 11/ SUBM DATE: 20Jul65/ ORIG REF: 007/ ATD PRESS: 4190

Card 2/2

ANDRIANOV, K.A., akademik; SLONIMSKIY, G.L.; KITAYGORODSKIY, A.I.; ZHDANOV, A.A.; BELAVTSEVA, Ye.M.; LEVIN, V.Yu.

Supermolecular structures of highly elastic polymers. Dokl. AN SSSR 166 no.3:593-594 Ja '66.

(MIRA 19:1)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

L 33514-66 EWT(m)/EWP(j)/T IJP(c) WW/RM

ACC NR: AP6015054 (A) SOURCE CODE: UR/0190/66/008/005/0898/0902

AUTHOR: Andrianov, K. A.; Slonimskiy, G. L.; Zhdanov, A. A.; Kashutina, E. A.; Levin, V. Yu.

65
B

ORG: Institute of Organoelemental Compounds, AN SSSR (Institut elementoorganicheskikh soyedineniy AN SSSR)

TITLE: Thermomechanical investigation of polyorganometallic siloxanes containing bivalent metals

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 8, no. 5, 1966, 898-902

TOPIC TAGS: polymer, metal, siloxane, atom, thermomechanical property, bivalent metal

ABSTRACT: Thermomechanical properties of polymers with atoms of bivalent metals in the siloxane chain have been investigated. It was shown that the introduction into the basic polymer chain of metal atoms capable of forming coordination bonds considerably changed the thermomechanical properties of polymers. The effect of metal atoms on the flow temperature of polymers depends on the distance between the metal atoms and on the nature of the metal. Orig. art. has: 5 figures, 1 formula, and 1 table.

[NT]

SUB CODE: 11, 07/ SUBM DATE: 22May65/ ORIG REF: 009/ OTH REF: 001

Card 1/1 90

UDC: 678.01:53+678.84

L 39981-66 EWT(m)/EWP(k)/T/EWP(w)/EWP(t)/ETI IJP(c) HW/JD

ACC NR: AP6021714 SOURCE CODE: UR/0130/66/000/003/0032/0033

AUTHOR: Zhdanov, A. A.; Shilkin, Yu. V.

ORG: Novosibirsk Metallurgical Plant (Novosibirskiy metallurgicheskiy zavod)

TITLE: Effect of the slab heating mode on the quality of plates

SOURCE: Metallurg, no. 3, 1966, 32-33

TOPIC TAGS: stainless steel, quality control, metal heat treatment, hot rolling, cold rolling, grain size / OKh13 stainless steel, 1Kh13 stainless steel

ABSTRACT: In the process of hot rolled sheets made from the Cr-containing stainless steels OKh13 and 1Kh13 a sizable number of sheets are scrapped due to edge cracking. The present study showed that the formation of edge cracks is a function of the slab soaking time in the processing furnaces. Data are given of the number of ingots with edge cracks in the rolled strip as a function of heating time at 1220-1260°C:

Heating time, hr - min	from 1-40 to 2-00	from 2-01 to 2-30	from 2-31 to 3-00
Number of ingots in which edge cracking appeared in rolled strips, % of rolled product	53.8	77.0	73.1

Card 1/2

ACC NR: AP6021714

With increase in heating time at constant temperature, edge cracking increases. It was established that at the edges, the grain size was 4 units, i. e., 3-4 units higher than in the average section of the plates. By increasing the rolling speed 25-30%, edge cracks formed along the entire length of the strips. By decreasing the rolling speed to ordinary levels, the edge cracking disappeared. The cause of edge cracking was attributed to the larger grain size at the edges and the consequent loss in ductility. Further experiments were carried out with a 30° lowering in the temperature of the preheating furnace. Orig. art. has: 1 table.

SUB CODE: 11,14/ SUBM DATE: none

Card 2/2

L 37010-66 EWP(j)/EWT(m)/T IJP(c) RM/WW/JWD

ACC NR: AP6023434 SOURCE CODE: UR/0190/66/008/007/1312/1313

AUTHOR: Slonimskiy, G. L.; Andrianov, K. A.; Zhdanov, A. A.; Levin, V. Yu.; Belavtseva, Ye. M.

46
44
B

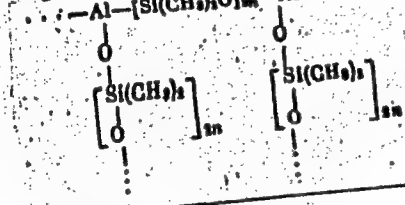
ORG: none

TITLE: Supramolecular structures of cross-linked high elastic polymers

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 8, no. 7, 1966, 1312-1313

TOPIC TAGS: elastic polymer, ~~morphological form~~, supramolecular form, globular structure, siloxane, alumosiloxane, polyaluminodimethylsiloxane, network structure, rubber, structure, polycondensation, solubility, elasticity, polymer cross linking, polymer

ABSTRACT: A study of the structure of cross-linked polyaluminodimethylsiloxane rubber was completed by means of electron microscopic photographs of platinum-carbon replica. A UMV-100 electron microscope was used. The rubber used had the following chemical structure:

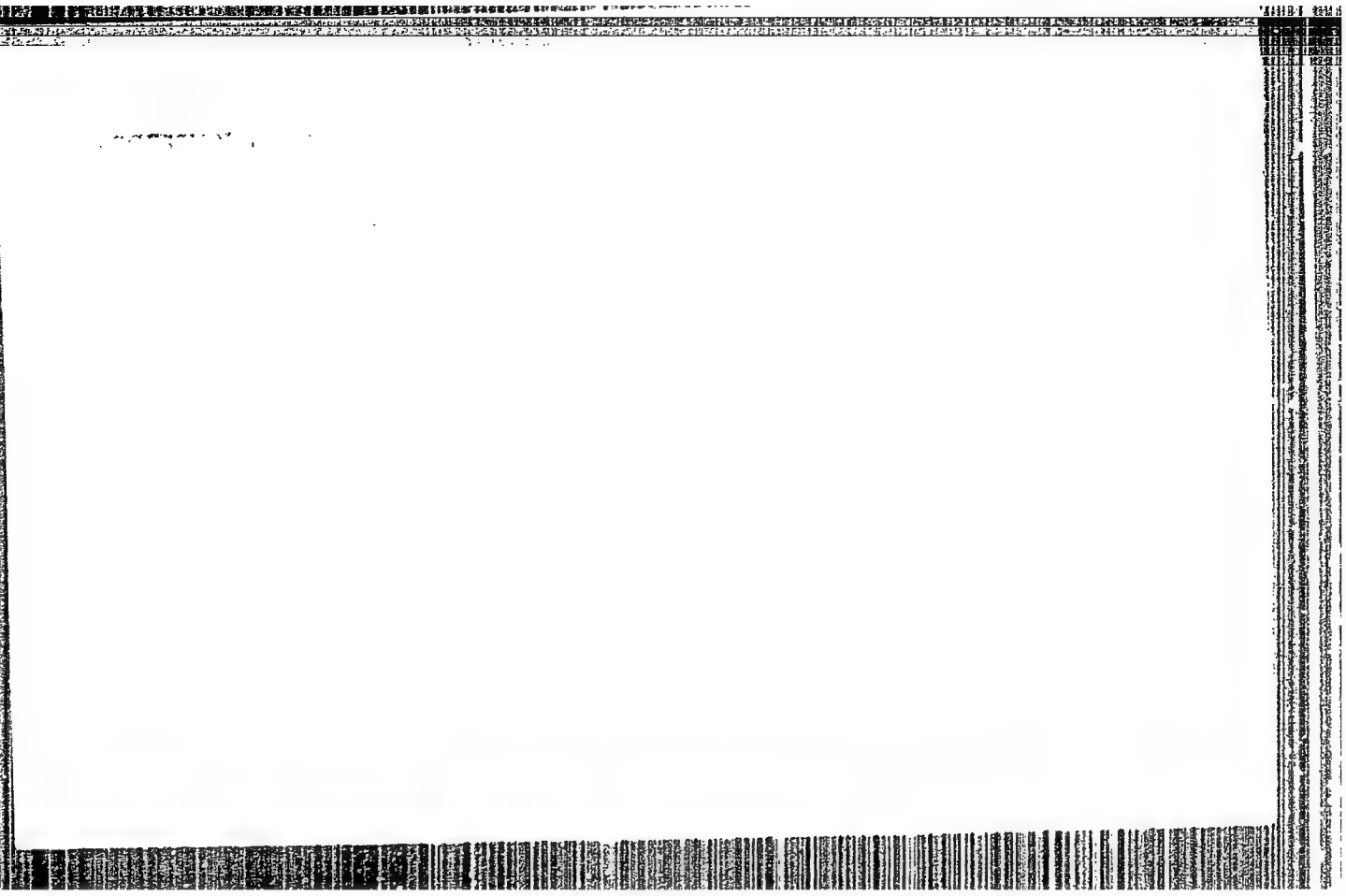


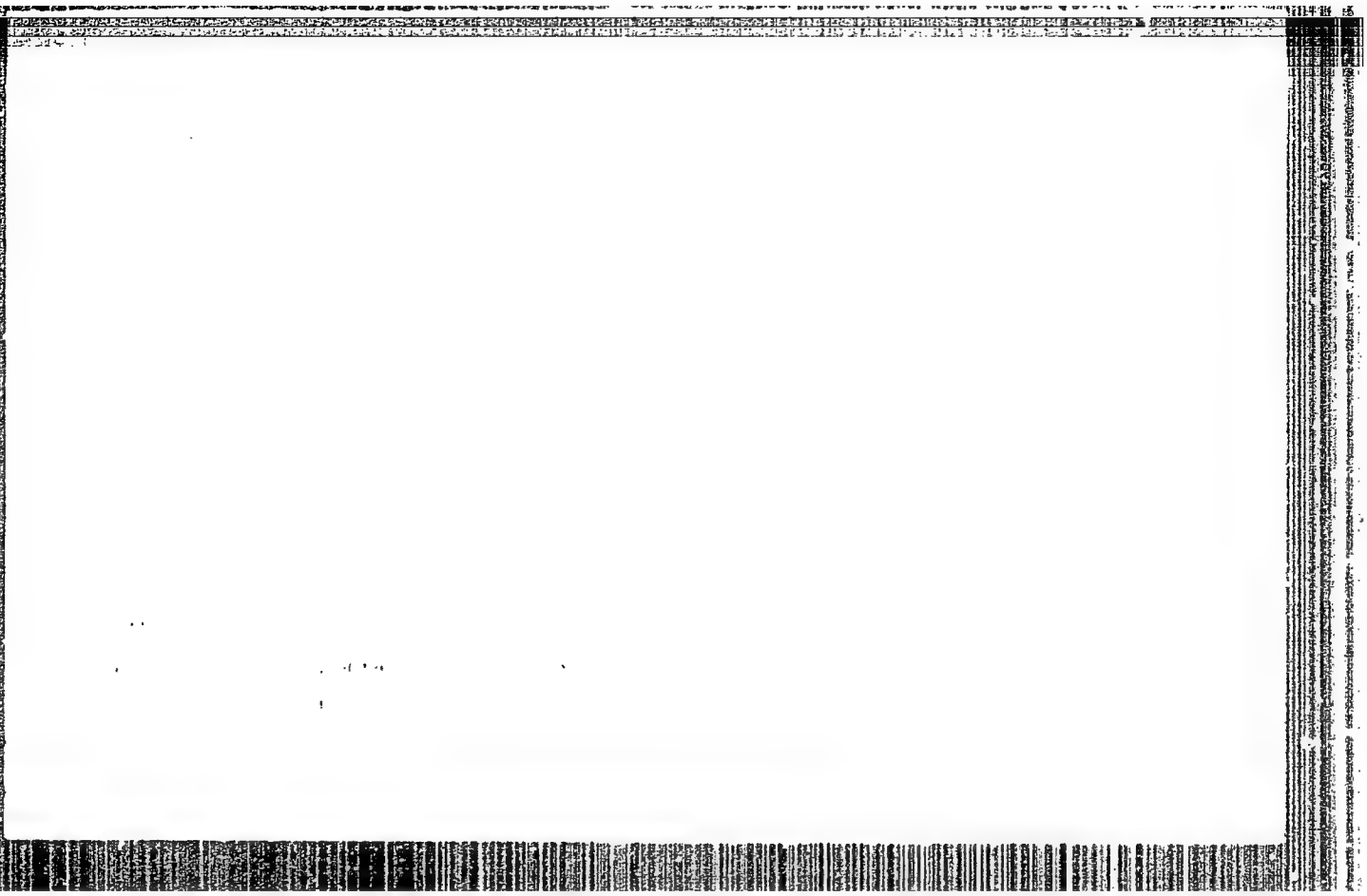
UDC: 678.01:53+678.84

Card 1/2

ZHDANOV, A.A.; PAKHOMOV, V.I.; ARKHIPOV, I.A.

Reaction of α-chloroalkylalcoxysilanes with 2-(trimethylsiloxy)-ethylamine. Plast. massy no.2:19-20 '66. (MIRA 19:2)





ZHDANOV, A.A.; ANDRIANOV, K.A., akademik; ODINETS, V.A.; KARPOVA, I.V.

Synthesis and polymerization of cyclotetrasiloxanes containing heterocyclic radicals with a silicon atom. Dokl. AN SSSR 162 no.2:335-338 My '65. (MIRA 18:5)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

ZHDANOV, A.A.; VOLEGOV, V.P.; SHILKIN, Yu.V.

The fusing together of cold rolled strips during annealing. Metallurg 10 no.8:27-28 Ag '64.

(MIRA 17:11)

1. Novosibirskiy metallurgicheskiy zavod i Ural'skiy nauchno-issledovatel'skiy institut chernykh metallov.

ANDRIANOV, K.A.; ZHDANOV, A.A.; KASHUTINA, E.A.

Synthesis and study of the properties of polydimethylsiloxanes containing carboxyl groups in organic end radicals. Zhur. ob. khim. 35 no.6:1037-1040 Je '65. (MIRA 18:6)

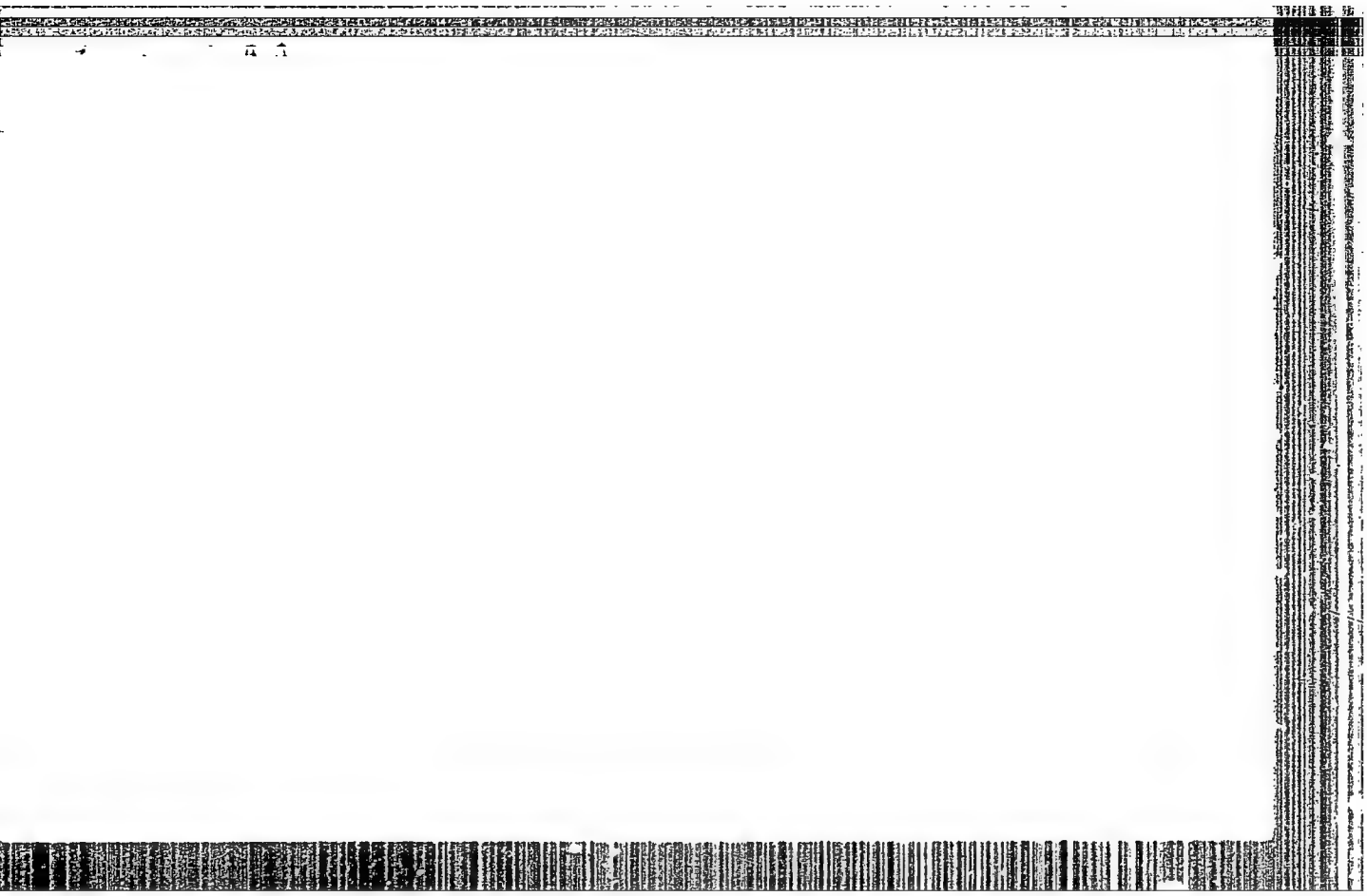
ZHDANOV, A.A., kandidat tekhnicheskikh nauk, dotsent.

Setting up and preparing piston-type combustion chambers of gas turbines for testing. Trudy RIIZHT no.17:227-231 '53.
(Gas turbines) (MLRA 9:6)

ZHDANOV, A. A.

ZHDANOV, A. A. : "The piston combustion chamber of a turbine using generator gas from anthracite". Moscow, 1955. Acad Sci USSR. Power Engineering Inst imeni G. M. Krzhizhanovskiy. (Dissertations for the degree of Doctor of Technical Sciences.)

SO: Knizhnaya Letopis' No. 50 10 December 1955. Moscow.



ZHDANOV, A.A., dots.

Using induction transducers for control of internal combustion engine operation. Trudy RIIZHT no.21:112-122 '58. (MIRA 11:6)
(Gas and oil engines) (Transducers)

ZHDANOV, A.A., kand. tekhn. nauk, dotsent; MISHKOVICH, I.M., kand. tekhn. nauk

Methods for testing 2D100 diesel locomotive engines by means of inductive pressure converters and the elements of their design. Trudy RIIZHT no.34:14-50 '61.

Processes taking place in the cylinders of a 2D100 engine during the start. Ibid.:71-94

Performance of 2D100 engines with one- and two-way fuel feed. Ibid.:95-108

Determining fuel consumption for train operation in case of the use of diesel traction. Ibid.:109-133 (MIRA 17:1)

VOLAROVICH, M.P.; BAYUK, Ye.I.; ZHDANOV, A.A.; TOMASHEVSKAYA, I.S.

Study of the elastic properties of rocks of the Kola Peninsula under hydrostatic pressure up to 7000 kg./cm^2. Izv. AN SSSR . Ser. geofiz. no.8:1178-1184 Ag '64 (MIRA 17:8)

1. Institut fiziki Zemli AN SSSR.

GRODSKIY, Ya. S.; ZHDANOV, A.A.

Starting and tuning up the central shielding gas station of the "Zaporozhstal'" plant. Gaz. prom. 7 no.6:24-30 '62.
(MIRA 17:6)

ZHDANOV, A.A.

Use of the quick-acting valve designed by Gravinskii. Gidrolis. i lesokhim. prom. 8 no.6:21-22 '55. (MLRA 9:1)

1.Mekhanik spirtovogo tsekha Leningradskogo gidrolisnogo zavoda.
(Valves)

L 9692-66 EWT(m)/E P(v)/E P(j)/T/ETC(m) WW/RM

ACC NR: AP6000994 SOURCE CODE: UR [illegible]

INVENTOR: Kiselev, B. A.; Severnyy, V. V.; Zhdanov, A. A.; Rodrova, V. V.; Guttsayt, E. Yu.; Semichev, V. P.

ORG: none

TITLE: Preparative method for glass-reinforced plastics. Class 39, No. 176421

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 22, 1965, 61-62

TOPIC TAGS: glass, reinforced plastic, binder, organosilicon compound

ABSTRACT: An Author Certificate has been issued for a preparative method for glass-reinforced plastics based on organosilicon binders. To lower the curing temperature, a mixture of low-molecular-weight liquid polyorganosiloxanes containing Si-H groups and polyorganosiloxanes with vinyl substituents on the Si atom are used as the binder. [BO]

SUB CODE: 11/ SUBM DATE: 29Dec64/ ATD PRESS: 4157

Card 1/1 UDC: 678.84

ACC NR: AP6002478 SOURCE CODE: UR/0191/66/000/001/0023/0025

AUTHOR: Zhdanov, A. A.; Severnyy, V. V.; Guttsayt, E. Yu.; Andrianov, K. A.

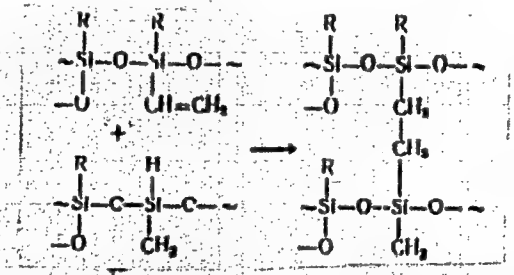
ORG: none

TITLE: Polyaddition reaction as a curing method for polyorganosiloxanes

SOURCE: Plasticheskiye massy, no. 1, 1966, 23-25

TOPIC TAGS: silicone, polysiloxane, curing, heat resistant plastic, oligomer, organic synthetic process

ABSTRACT: A study has been made of the addition reaction



as a method of curing polyorganosiloxanes. Cure by this method was expected to produce solid, monolithic materials because no volatiles are evolved. Two series

Card 1/2 UDC: 678.84

L 11791-66

ACC NR: AP6002478

of siloxane oligomers were synthesized which, in addition to various other substituents, contained some hydrogen substituents as silicon atoms in one case, and some vinyl substituents, in the other. From these oligomers samples were prepared containing equimolar amounts of vinyl and hydrogen groups. The samples were cured in the presence of chloroplatinic acid at 150C. The experimental results are given in tabular and graphic form in the source. The cured polymers were solid transparent materials infusible at 200C. Orig. art. has: 4 figures and 4 tables.

[SM]

SUB CODE: 07, 11/ SUBM DATE: none/ ORIG REF: 001/ OTH REF: 004/ ATD PRESS: 4/77

Card 2/2

ACC NR: AP6025396 (A) SOURCE CODE: UR/0062/66/000/007/1145/1154

AUTHOR: Petrashko, A. I.; Yelinek, V. I.; Andrianov, K. A.; Zhdanov, A. A.; Gashnikova, N. N.; Golubkov, G. Ye.; Litvinova, L. F.

37
B

ORG: All-Union Electrical Engineering Institute im. V. I. Lenin (Vsesoyuznyy elektrotekhnicheskiy institut); Institute of Organometallic Compounds, Academy of Sciences, SSSR (Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR)

TITLE: Study of the conversions of polyorganosiloxanes in the course of thermal polycondensation and catalytic polymerization

SOURCE: AN SSSR. Izv. Ser khim, no. 7, 1966, 1145-1154

TOPIC TAGS: catalytic polymerization, polycondensation, siloxane

ABSTRACT: Changes in certain properties of polyorganosiloxanes were followed during their synthesis from organosiloxane oligomers of various compositions. IR spectroscopic analysis confirmed the structural differences in the oligomers obtained by double decomposition and hydrolytic polycondensation. In the process of thermal and catalytic conversions, these differences disappear, and the polymers have a similar structure independently of the method by which the original oligomers were prepared. It is postulated that thermal polycondensation involves the formation of oxygen bridges between the molecular chains as a result of condensation of hydroxyl groups, and hydrocarbon bridges as a result of oxidation of methyl groups of neighboring molecular chains; the

Card 1/2 UDC: 546.287+542.97+542.952+543.422

ACC NR: AP6025396

relative importance of these two processes is determined by the composition and structure of the oligomers. Compared to thermal polycondensation, catalytic polymerization leads to the formation of polymers having a higher glass-transition temperature and a wider temperature range of the highly elastic state; this is due to a greater flexibility and mobility of the chains of their molecules owing to the opening of the cyclic links in the oligomer molecules. Orig. art. has: 5 figures and 3 tables.

SUB CODE: 07/ SUBM DATE: 14Feb64/ ORIG REF: 005/ OTH REF: 003

Card 2/2 ULR

ACC NR: AP6023430 SOURCE CODE: UR/0190/66/008/007/1226/1230

AUTHOR: Verkhotin, M. A.; Andrianov, K. A.; Zhdanov, A. A.; Kurasheva, N. A.; Rafikov, S. R.; Rode, V. V. 44 B

ORG: Institute of Hetero-organic Compounds, AN SSSR (Institut elementoorganicheskikh soyedineniy AN SSSR)

TITLE: Thermal degradation of certain polymetallodimethylsiloxanes 15

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 8, no. 7, 1966, 1226-1230

TOPIC TAGS: polysiloxane, titanium compound, polymer degradation, organoaluminum compound, depolymerization, elastomer

ABSTRACT: The thermal degradation of polyaluminodimethylsiloxane (PAS) and polytitanodimethylsiloxane (PTS) (see Fig. 1) was studied in a vacuum at various temperatures. The predominant process in the thermal aging of the polymers was found to be depolymerization involving rupture of the Si-O bond and formation of hexamethylcyclotrisiloxane. The depolymerization begins after the gel formation maximum has been reached; at the same time, the aluminum atom in the elastomer chain slightly increases and the titanium atom considerably decreases the depolymerization rate as compared to polydimethylsiloxane. The gel formation maximum in polytitanodimethylsiloxane is shifted by 200° toward higher temperatures as compared to polyaluminodimethylsiloxane. In addition to the depolymerization, a homolytic rupture of Si-C and C-H bonds with the liberation of hydrogen, methane, and ethane takes place during the thermal degra-

Card 1/2 UDC: 678.01:541.678.84

Card 2/2 MLP

ZHDANOV, Andrey Andreyevich; LEVSHIN, Lev Vasil'yevich; KAZAKOVA, L.A., red.; DYKOVA, V.V., tekhn.red.

[Protection of forest and water resources in the U.S.S.R.] Okhrana lesnykh i vodnykh bogatstv v SSSR. Moskva, Gos.izd-vo iurid.lit-ry, 1958. 49 p. (MIRA 12:2)
(Forests and forestry) (Hunting) (Fisheries)

ZHDANOV, A.D., prof., red.; SERGEYEV, Yu.P., red.

[International anatomical nomenclature] Mezhdunarodnaia anatomicheskaia nomenklatura. Izd.2. Moskva, Meditsina, 1964. 77 p. (MIRA 17:5)

1. Chlen-korrespondent AMN SSSR (for Zhdanov).

PHASE I BOOK EXPLOITATION SOV/4402

Zhdanov, A. I., Ye. A. Levanova, N. S. Basina, G. N. Sergeyeva, and R. P. Khromova

Rukovodstvo po opredeleniyu stoimosti i ekonomicheskoy effektivnosti modernizatsii metallorezhushchikh stankov; rukovodyashchiye materialy (Manual on Determining Cost and Economic Effectiveness of the Modernization of Metal-Cutting Machine Tools; Guide Materials) Moscow, Mashgiz, 1958. 52 p. Errata slip inserted. 3,000 copies printed.

Sponsoring Agency: Moscow. Eksperimental'nyy nauchno-issledovatel'skiy institut metallorezhushchikh stankov.

Ed.: A. Ye. Prokopovich; Tech. Ed.: A. F. Uvarova; Managing Ed. for Literature on Metalworking and Tool Making: R. D. Beyzel'man, Engineer.

PURPOSE: This handbook is intended for personnel of chief-mechanic sections and design sections of machine-tool plants.

Card 1/4

COVERAGE: The handbook contains information on costs and economic effectiveness of the modernization of metal-cutting machine tools. Tables of cutting standards for cutters, drills, milling cutters, gear cutters, and grinding wheels are presented. Several machine-tool plants are mentioned in the text. No personalities are mentioned. There are no references.

TABLE OF CONTENTS:

25(5) PHASE I BOOK EXPLOITATION SOV/2784

Zhdanov, Aleksandr Ivanovich, Candidate of Economical Sciences

Metodika opredeleniya ekonomicheskoy effektivnosti modernizatsii oborudovaniya (Methods of Determining Economic Efficiency in the Modernization of Equipment) Moscow, Gosplanizdat, 1959. 109 p. Errata slip inserted. 5,000 copies printed.

Ed.: P. A. Osada; Tech. Ed.: A. A. Ponomareva.

PURPOSE: This book is intended for industrial engineers.

COVERAGE: The book describes the significance of machine-tool modernization to overall industrial development of the Soviet Union during the 1959-65 period and presents methods for computing production costs based on both new and modernized units. The author emphasizes the fact that despite the great need for modernized equipment, only about 1.3 percent of all metal-cutting machine tools are modernized annuallyin the USSR. Appendix 9 and 10 bring together in table form data on the 1956 production of various machine tools. This table includes besides the designation and model number of each tool, the size of lots which range from 10 units for complex machine tools to more

Card 1/3

than 6,000 units for engine lathes, etc. No personalities are mentioned. There are no references.

TABLE OF CONTENTS:

Methods of Determining Economic Efficiency (Cont.) SOV/2784

Appendixes

63

AVAILABLE: Library of Congress

Card 3/3

JG/os
1/11/60

ZHDANOV, Aleksandr Ivanovich; MAKSIMOV, I.S., red.; PONOMAREVA, A.A., tekhn.red.

[Economic efficiency of the modernization of equipment] Ekonomicheskaia effektivnost' modernizatsii oborudovaniia. Moskva, Gosplanizdat, 1960. 151 p. (MIRA 14:1)
(Industrial equipment--Technological innovations)

ZHDANOV, Aleksandr Ivanovich; SOLYANSKIY, A.A., spets.red.; ZAV'YALOVA, A.N., red.; PONOMAREVA, A.A., tekhn. red.

[Economic efficiency of advanced methods of metalworking; methods of calculation]Ekonomicheskaia effektivnost' progressivnykh metodov metalloobrabotki; metodika rascheta. Moskva, Ekonomizdat, 1962. 133 p. (MIRA 15:10)
(Metalworking)

ZHDANOV, Aleksandr Ivanovich; ZAV'YALOVA, A.N., red .; GERASIMOVA, Ye.S., tekhn. red.

[Economic efficiency of equipment modernization] Ekonomicheskaia effektivnost' modernizatsii oborudovaniia. Izd.2., dop. i perer. Moskva, Ekonomizdat, 1963. 199 p.
(MIRA 16:12)
(Machinery industry—Technological innovations)

SANKIN, D.I., kand. ekon. nauk; SEMINOV, S.I., kand. ekon. nauk; BEREZNOY, N.I., kand. ekon. nauk; ZHDANOV, A.I., kand. ekon. nauk; GORCHAKOV, A.A., inzh.; ZAKHAROV, V.V., inzh.; YUNOVICH, I.M., inzh.; RYVKIN, A.S., inzh.; KOVRIGIN, V.V., ekonomist; DIDENKO, S.I., kand. ekon. nauk; SANDOMIRSKIY, A.T., ekonomist; GONCHARENKO, B.L., kand. ekon. nauk; KOTOV, V.F., inzh.; EYDEL'MAN, B.I., red.

[Handbook for the economist and planner in an industrial enterprise] Spravochnik ekonomista i planovika promyshlennogo predpriiatiia. Moskva, Ekonomika, 1964. 698 p. (MIRA 17:6)

2

The heat capacities of some pure liquids and azeotropic mixtures. A. K. Zhdanov. *J. Gen. Chem.* (U. S. S. R.) 11, No. 7, 471-82(1941).—Measurements of the heat capacities (C_p) were made for CCl_4, PrOH, benzene, iso-BuOH, PhMe and the azeotropic mixts.: benzene-MeCOEt, PhMe-iso-AmOH, benzene-PrOH, CCl_4-PrOH, CCl_4-iso-BuOH, PhMe-PrOH, CCl_4-iso-BuOH and PhMe-iso-BuOH at 4.5-6°, 24-5° and 44.5-47.2°. The deviations of results were ±0.001 and the exptl. errors of the C_p values did not exceed 0.5%. Interpolation equations of the type $C_p = A + BT + CT^2$ were also obtained. The following values were obtained for CCl_4 at 278.68, 298.01 and 319.23°, resp.: C_p 0.2018, 0.2063 and 0.2096. For PrOH the corresponding values at 279.66, 290.76, 297.57, 304.06 and 318.83° were C_p 0.5431, 0.5622, 0.5781, 0.5951 and 0.6480. For iso-BuOH at 278.34, 298.25 and 319.01° the values were C_p 0.5322, 0.5916 and 0.6600. For benzene at 281.38, 298.61 and 318.81° the values were C_p 0.4044, 0.4141 and 0.4316. For PhMe at 278.81, 296.80 and 320.42° the values were C_p 0.3871, 0.4077 and 0.4312. For the azeotropic mixt. benzene (62.5%)-MeCOEt (37.5%) at 278.23, 298.27 and 318.81° the values were C_p 0.4390, 0.4587 and 0.4787. For PhMe (86%)-iso-AmOH (14%) at 278.25, 289.86, 305.46 and 319.77° the values were, resp., C_p 0.4228, 0.4447, 0.4647 and 0.4777. For benzene (83.1%)-PrOH (16.9%) at 278.43, 297.50 and 318.88° the values were, resp., C_p 0.4623, 0.4908 and 0.5115. For CCl_4 (88.5%)-PrOH (11.5%) at 278.86, 297.04 and 319.68° the values were C_p 0.2623, 0.2681 and 0.2781. For CCl_4 (82%)-iso-PrOH (18%) at 278.20, 296.95 and 320.13° the values were C_p 0.2814, 0.3003 and 0.3316. For PhMe (47.5%)-PrOH (52.5%) at 278.44, 296.09 and 318.41° the values were C_p 0.5041, 0.5365 and 0.5787. For PhMe (55.5%)-iso-BuOH (44.5%) at 278.62, 298.34 and 317.75° the values were C_p 0.4987, 0.5223 and 0.5607. For CCl_4 (94.5%)-iso-BuOH (5.5%) at 278.56, 298.77 and 319.60° the values were C_p 0.2320, 0.2462 and 0.2540. The values of A, $B \times 10^3$ and $C \times 10^6$ in the interpolation equation and the value $k_t \times 10^3$ for the equation $MC_{pv} = k_t T_v^2$ are, resp., CCl_4, 22.23, 3.103, — and 0.78; PrOH 176.34, −110.5483, 21.1842 and 1.12; iso-BuOH −26.31, 23.26, — and 1.14; benzene 18.45, 3.5627, 0.2813 and 0.81; PhMe 8.42, 9.76, — and 0.82; benzene-PrOH −75.06, 65.690, −9.4844 and 0.94; benzene-MeCOEt 12.56, 7.429, — and 0.89; PhMe-iso-AmOH 13.12, 9.375, — and 0.89; CCl_4-PrOH −111.30, 89.5549, 13.5827 and 0.93; CCl_4-iso-PrOH 71.85, −38.0807, 8.7720 and 1.07; CCl_4-iso-BuOH −90.26, 76.4934, −11.4846 and 0.93; PhMe-PrOH 7.68, 7.5249, 0.9889 and 1.00; PhMe-iso-BuOH 108.48, −87.7891, 13.1099 and 1.15. Four references.

W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

CA

2

Increase in entropy during the formation of azeotropic mixtures. A. K. Zhdanov. *J. Gen. Chem.* (U. S. S. R.) 11, 483-92(1941).—An equation for the change of entropy taking place during the formation of a mixt. from 2 or several liquids was derived. The change in entropy is given by the equation $\Delta S_i = [(\Sigma x_i \lambda_{ci} - \lambda_{cm})/T_c] + A(1 - p)[\partial(v_m - \Sigma x_i V_i)/\partial T] + (a_m - \Sigma x_i A_i) \ln (T/T_c) + (b_m - \Sigma x_i B_i)(T - T_c) - ARΣx_i \ln c_i$, where ΔS_i is the change of entropy of the liquid, T the temp., p the pressure, x_i the no. of gram.-mols. of the i-th component contained in 1 g. of the mixt., λ_{ci} the mol. latent heat of evapn. of the components at the b. p. of the azeotropic mixt. under normal pressure, λ_{cm} the sp. latent heat of evapn. of the azeotropic mixt. at the b. p. of the mixt. and at normal pressure, T_c the b. p. of the azeotropic mixt. under normal pressure, A and R the consts. of the Gibbs equation, A_i, B_i and C_i the consts. of the interpolation equation for C_{pi}, and x_i and c_i the compn. of the azeotropic mixt. For the azeotropic mixt. benzene-PrOH the ΔS_i value is given by the equation $\Delta S_i = 7.120 + 0.008 p - 0.000012 pT + 0.000000232 pT^2 + 0.01109 T - 0.00000803 T^2 - 1.703 \ln T$. For the azeotropic mixt. PhMe-PrOH $\Delta S_i = 6.100 + 0.0001 p - 0.000001 pT + 0.00000000 pT^2 + 0.01021 T - 0.00000556 T^2 - 1.478 \ln T$. For the azeotropic mixt. PhMe-iso-BuOH $\Delta S_i = -5.900 - 0.0002 p + 0.000001 pT - 0.000000008 pT^2 - 0.00887 T + 0.00000729 T^2 + 1.410 \ln T$. For the azeotropic mixt. CCl_4-iso-BuOH $\Delta S_i = 3.126 + 0.0001 p - 0.0000004 pT + 0.00000000 pT^2 + 0.00492 T - 0.00000806 T^2 - 0.760 \ln T$. An analysis of these equations shows that ΔS_i of all 4 azeotropic mixts. increases with increase in temp. at const. pressure. The change of pressure (at const. temp.) has practically no effect on ΔS_i. The total change of entropy that accompanies the formation of azeotropic mixts. is composed of the change of entropy taking place during the formation of a mixt. from ideal liquids (which does not depend on the nature of the mixed liquid and is equal to $-ARΣx_i \ln c_i$) and of the change of the entropy taking place from the reaction between the mols. of the components (which depends on the nature of the mixed liquids and is expressed by the remaining members of the interpolation equation for ΔS_i). A comparison of the change of entropy from the reaction between the mols. of the components, of the azeotropic declination (δ) and azeotropic deviation (θ) shows that the change of entropy is at its max. when δ is at its max. and θ at its min. Nine references.

W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

CA

2

PROCESSES AND PROPERTIES INDEX

Increase of the entropy in case of the formation of azeotropic mixtures. II. A. K. Zhdanov. *J. Gen. Chem.* (U.S.S.R.) 15, 587-90(1945)(English summary); cf. *C.A.* 36, 961[4].—By use of the data of thermal expansion, latent heat of evapn. and sp. heat at const. vol., there were detd. the values for entropy changes on formation of azeotropes in the following systems: benzene-iso-BuOH, CS_2-Me_2CO, CS_2-iso-PrOH, and CS_2-EtOAc. The equations used in the calcns. are presented with the numerical results; at normal pressure and in the range between 0° and the b.p. of the azeotropes these were: 1.05-1.92 cal., 2.45-2.55 cal., 0.86-1.21 cal., and 0.76-1.88 cal., resp.

O. M. Kosolapoff

ASS-SLA METALLURGICAL LITERATURE CLASSIFICATION

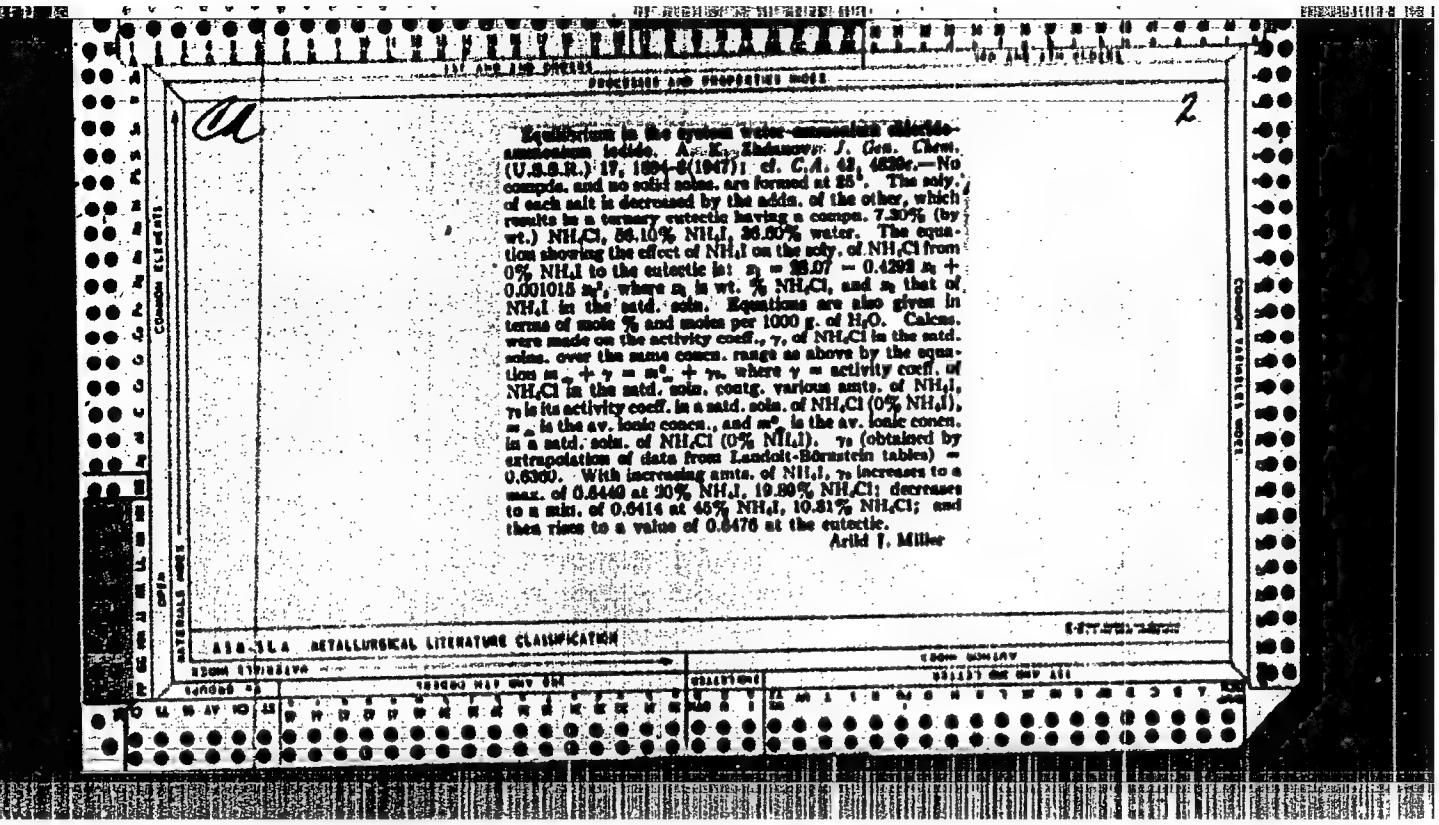
CA

2

Heat capacity of some pure liquids and azeotropic mixtures. II. A. K. Zhdanov (Middle Asiatic State Univ., Tashkent). *J. Gen. Chem.* (U.S.S.R.) 15, 808-[illegible](1945)(English summary); cf. C.A. 38, 7378. —Values for C_p were detd. for iso-PrOH, iso-AmOH, EtOAc, CS_2, and the azeotropes: benzene-iso-PrOH, benzene-iso-BuOH, CS_2-Me_2CO, CS_2-MeEtCO, CS_2-iso-PrOH, CS_2-EtOAc, CCl_4-MeEtCO, CCl_4-EtOAc, and $CHCl_3$-HCOOEt. In all cases the second deriv. of the thermodynamic potential in respect to temp. was detd. In all cases interpolation formulas of the type $C_p = A + BT + CT^2$ were applicable, on the basis of which the values of k in $MC_p = kT^2$ were found. The results are given in tabular form.

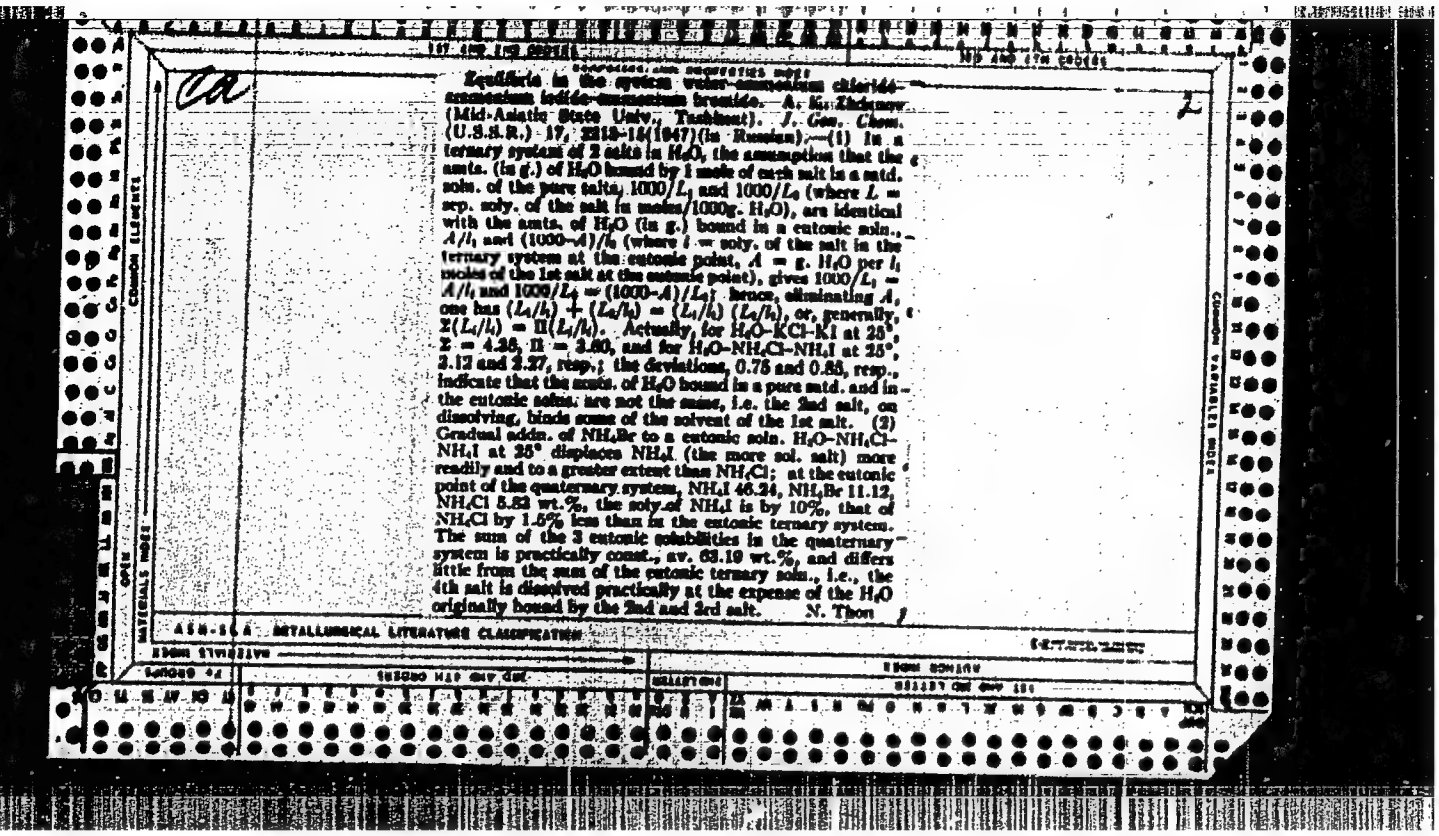
O. M. Kosolapoff

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Equilibrium in the system water–ammonium chloride–ammonium iodide. A. K. Zhdanov. *J. Gen. Chem.* (U.S.S.R.) 17, 1694–8(1947); cf. *C.A.* 42, 4629e.—No compds. and no solid solns. are formed at 25°. The solv. of each salt is decreased by the addn. of the other, which results in a ternary eutectic having a compn. 7.30% (by wt.) NH_4Cl, 56.10% NH_4I, 36.60% water. The equation showing the effect of NH_4I on the solv. of NH_4Cl from 0% NH_4I to the eutectic is: $s_1 = 28.07 - 0.4291\ s_2 + 0.001015\ s_2^2$, where s_1 is wt. % NH_4Cl, and s_2 that of NH_4I in the satd. soln. Equations are also given in terms of mole % and moles per 1000 g. of H_2O. Calcns. were made on the activity coeff., γ, of NH_4Cl in the satd. solns. over the same concn. range as above by the equation $m_\pm + \gamma = m^0_\pm + \gamma_0$, where γ = activity coeff. of NH_4Cl in the satd. soln. contg. various amts. of NH_4I, γ_0 is its activity coeff. in a satd. soln. of NH_4Cl (0% NH_4I), $m_\pm$ is the av. ionic concn., and $m^0_\pm$ is the av. ionic concn. in a satd. soln. of NH_4Cl (0% NH_4I). γ_0 (obtained by extrapolation of data from Landolt-Börnstein tables) = 0.6360. With increasing amts. of NH_4I, γ_0 increases to a max. of 0.6440 at 20% NH_4I, 19.80% NH_4Cl; decreases to a min. of 0.6414 at 45% NH_4I, 10.81% NH_4Cl; and then rises to a value of 0.6476 at the eutectic.

Arild J. Miller



Ca

Equilibria in the system water–ammonium chloride–ammonium iodide–ammonium bromide. A. Kh. Zhdanov (Mid-Asiatic State Univ., Tashkent). *J. Gen. Chem. (U.S.S.R.)* 17, 2213–16 (1947) (in Russian).—(1) In a ternary system of 2 salts in H_2O, the assumption that the amts. (in g.) of H_2O bound by 1 mole of each salt in a satd. soln. of the pure salts, $1000/L_1$ and $1000/L_2$ (where L = sep. soly. of the salt in moles/1000 g. H_2O), are identical with the amts. of H_2O (in g.) bound in a eutonic soln., A/l_1 and $(1000-A)/l_2$ (where l = soly. of the salt in the ternary system at the eutonic point, A = g. H_2O per l_1 moles of the 1st salt at the eutonic point), gives $1000/L_1 = A/l_1$ and $1000/L_2 = (1000-A)/L_2$; hence, eliminating A, one has $(L_1/l_1) + (L_2/l_2) = (L_1/l_1)(L_2/l_2)$, or, generally, $\Sigma(L_i/l_i) = \Pi(L_i/l_i)$. Actually, for H_2O–KCl–KI at 25°, $\Sigma = 4.35$, $\Pi = 3.80$, and for H_2O–NH_4Cl–NH_4I at 25°, 3.12 and 2.27, resp.; the deviations, 0.75 and 0.85, resp., indicate that the amts. of H_2O bound in a pure satd. and in the eutonic solns. are not the same, i.e. the 2nd salt, on dissolving, binds some of the solvent of the 1st salt. (2) Gradual addn. of NH_4Br to a eutonic soln. H_2O–NH_4Cl–NH_4I at 25° displaces NH_4I (the more sol. salt) more readily and to a greater extent than NH_4Cl; at the eutonic point of the quaternary system, NH_4I 46.24, NH_4Br 11.12, NH_4Cl 5.82 wt.%, the soly. of NH_4I is by 10%, that of NH_4Cl by 1.5% less than in the eutonic ternary system. The sum of the 3 eutonic solubilities in the quaternary system is practically const., av. 63.19 wt.%, and differs little from the sum of the eutonic ternary soln., i.e., the 4th salt is dissolved practically at the expense of the H_2O originally bound by the 2nd and 3rd salt. N. Thon

A.K. ZHDANOV,

8/49T25

USSR/Chemistry - Systems, Alkali Metal Halides Apr 48
Chemistry - Solubility

"Equilibrium in the System: Water - Potassium Chloride-Potassium Bromide - Potassium Iodide," A. K. Zhdanov, Cen Asiatic State U, 5 pp

"Zhur Obshch Khim" Vol XVIII (LXXX), No 4

Ascertained solubility of system H_2O - KCl - KBr at 25°. Obtained empirical equations for alteration of solubility of KCl in presence of KBr. Calculated coefficients of activity of KCl in the presence of various quantities of KBr. Determined solubility in the 4-component system H_2O - KCl - KBr - KI at 25°.

8/49T25

USSR/Chemistry - Systems, Alkali Metal Halides (Contd) Apr 48

Submitted 2 Dec 1946.

8/49T25

ZHDANOV, A. K.

8/49126

USSR/Chemistry - Systems, Alkali Metal Halides Chemistry - Solubility Apr 48

"Equilibrium in the System: Water - Potassium Chloride - Potassium Iodide," A. K. Zhdanov, N. Kovalenko, Gen Asiatic State U, 7½ pp

"Zhur Obshch Khim" Vol XVIII (LXXX), No 4

Determined solubility of 3-component system H_2O - KCl - KI at 0°, 25°, 50° and 75°. Obtained empirical equations for solubility of KCl in presence of KI, up to eutectic point, for four temperatures 0°, 25°, 50° and 75°. To check these with the equation of Vant-Hoff and Le Chatelier (as applied to concentrated [redacted] 8/49126

USSR/Chemistry - Systems, Alkali Metal Halides (Contd) Apr 48

electrolyte solutions by Ye. I. Poznar), calculated ultimate heat of solution of KCl with T = 298.2°. Calculated coefficients of activity of KCl at 25° with various KI contents up to eutectic point. Submitted 10 Nov 1946.

8/49126

CA 2

Equilibria in the system H_2O-NaCl-NaI. A. K. Zhdanov and V. Adamenkova. *Zhur. Obshchei Khim.* (J. Gen. Chem.) 18, 251-6(1948).—Solubilities in the 3-component system were detd. at 0, 25, 50, 75, and 100°. The soly. of NaCl in the presence of NaI, up to the eutectic point, can be expressed by the empirical formulas $n_1 = A_1 - B_1 n_2 + C_1 n_2^2$, $N_1 = A_2 - B_2 N_2 + C_2 N_2^2$, $m_1 = A_3 - B_3 m_2 + C_3 m_2^2$, where n_1, N_1, and m_1 are wt. %, mol. %, and molality of NaCl, resp., and n_2, N_2, and m_2 refer to NaI. Similarly, the effect of temp. on the coeffs. A_1, B_1, and C_1, etc., can be expressed $A_1 = a_1 + b_1 T + c_1 T^2$, $B_1 = d_1 + e_1 T + f_1 T^2$, $C_1 = k_1 + l_1 T + m_1 T^2$. Thus, with use of empirical values for all consts., the final equations expressing the soly. of NaCl as a function of temp. and of NaI concn. are: $n_1 = (26.07 + 0.5464 n_2 - 0.01847 n_2^2) - (0.03636 + 0.006663 n_2 - 0.0001220 n_2^2)T + (0.00008107 + 0.000003966 n_2 - 0.0000001712 n_2^2)T^2$; $N_1 = (22.52 - 1.7902 N_2 - 0.0003817 N_2^2) - (0.08540 - 0.006392 N_2 - 0.0001601 N_2^2)T + (0.0001430 - 0.000007852 N_2 - 0.0000003811 N_2^2)T^2$; $m_1 = (14.97 - 1.4825 m_2 - 0.01212 m_2^2) - (0.03360 - 0.002910 m_2 - 0.0003787 m_2^2)T + (0.00008010 - $ [illegible] $m_2 - 0.0000007469 m_2^2)T^2$. The activity coeffs. of NaCl at 25° were calcd. for various concns. of NaI up to the eutectic point. A. J. M.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

ZHDANOV, A. K.
USSR/Chemistry

Card 1/1

Authors : Zhdanov, A. K.; and Sarkazov, M. A.

Title : Solubility in the water - ethyl alcohol - ammonia bifluoride system at 25°

Periodical : Zhur. Ob. Khim 24, Ed. 5, 759 - 762, May 1954

Abstract : The solubility in the water - ethyl alcohol - ammonia bifluoride system at 25° was determined experimentally. The solubility of ammonia bifluoride in water was established at 0, 25, 40, and 50°. Anhydrous ammonia bifluoride represents the solid phase in the ternary system water - ethyl alcohol - ammonia bifluoride at 40°. The solubility of ammonia bifluoride in water-alcohol mixtures decreases with the increase in the alcohol content of the mixture and reaches (at 25°) a value of 1.73 weight % in the presence of 90% alcohol as compared with 43.73 weight % obtained in pure water. Three USSR references. Tables, graph.

Institution : Central Asiatic State University

Submitted : September 26, 1953

ZHDANOV, A. K.
USSR/Chemistry

Card 1/1

Author : Zhdanov, A. K.

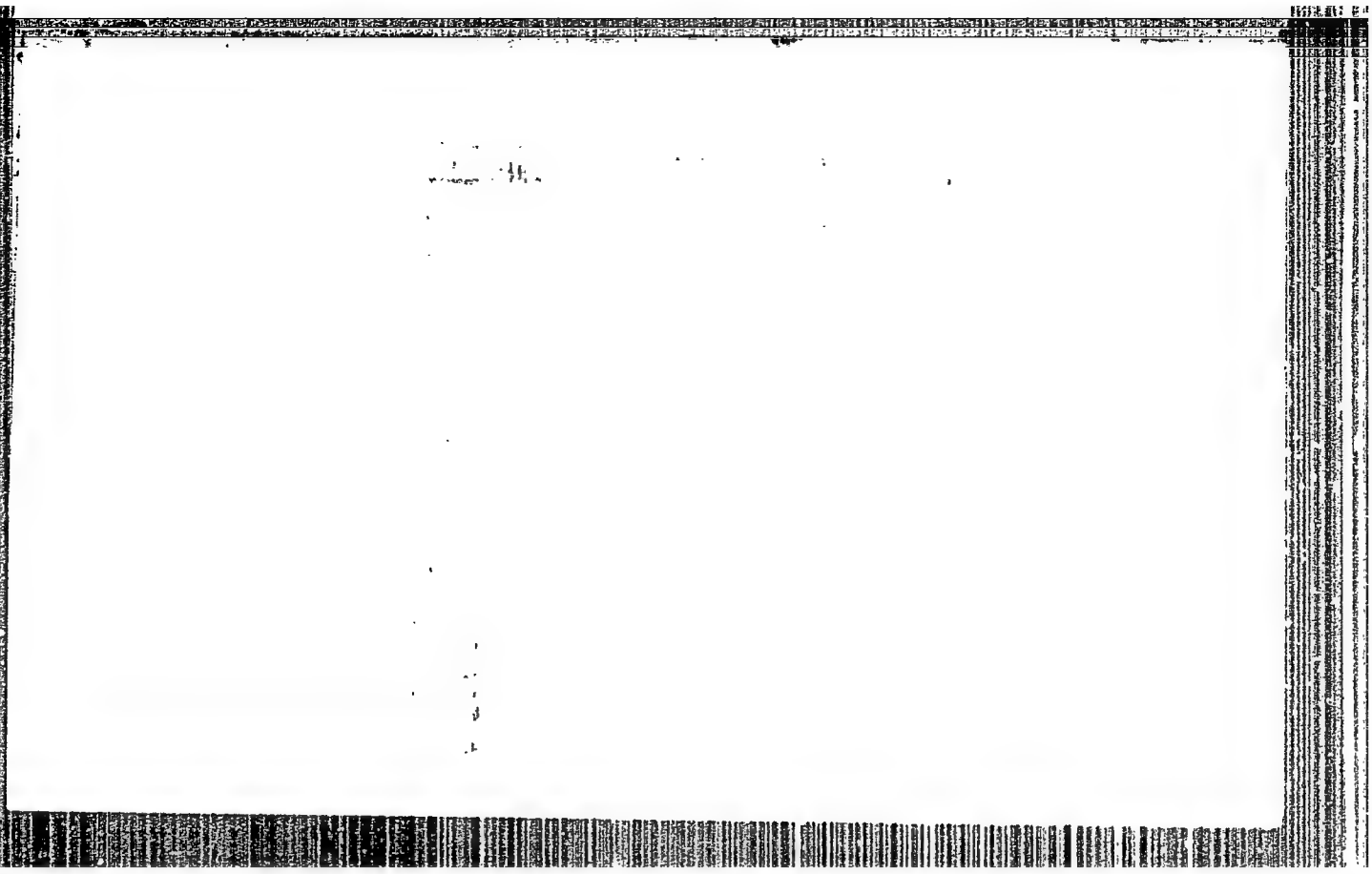
Title : Solubility in the water - ethyl alcohol - sodium fluoride system at 0 and 25°

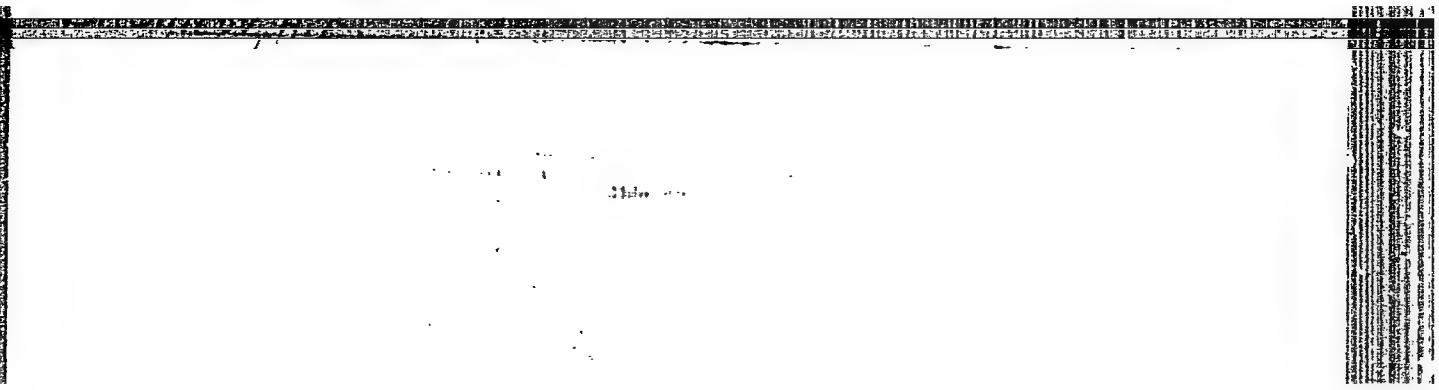
Periodical : Zhur. Ob. Khim. 24, Ed. 5, 762 - 766, May 1954

Abstract : The solubilities in the water - ethyl alcohol - sodium fluoride system were determined at 0 and 25°. The anhydrous sodium fluoride represents the solid phase in the ternary system water - ethyl alcohol - sodium fluoride at 0 and 25°. The solubility of sodium fluoride in water-alcohol mixtures decreases with the increase of the alcohol content in the mixtures. Since the solubility of sodium fluoride in water-alcohol mixtures containing more than 50% alcohol is very low and changes only very slightly during further increase in the alcohol concentration of the mixture, water-alcohol mixtures containing 50-60% alcohol should be used for washing the residues of binary and complex fluorides from the excess of sodium fluoride and other admixtures. Five references. Tables, graphs.

Institution : Central Asiatic State University

Submitted : September 26, 1953





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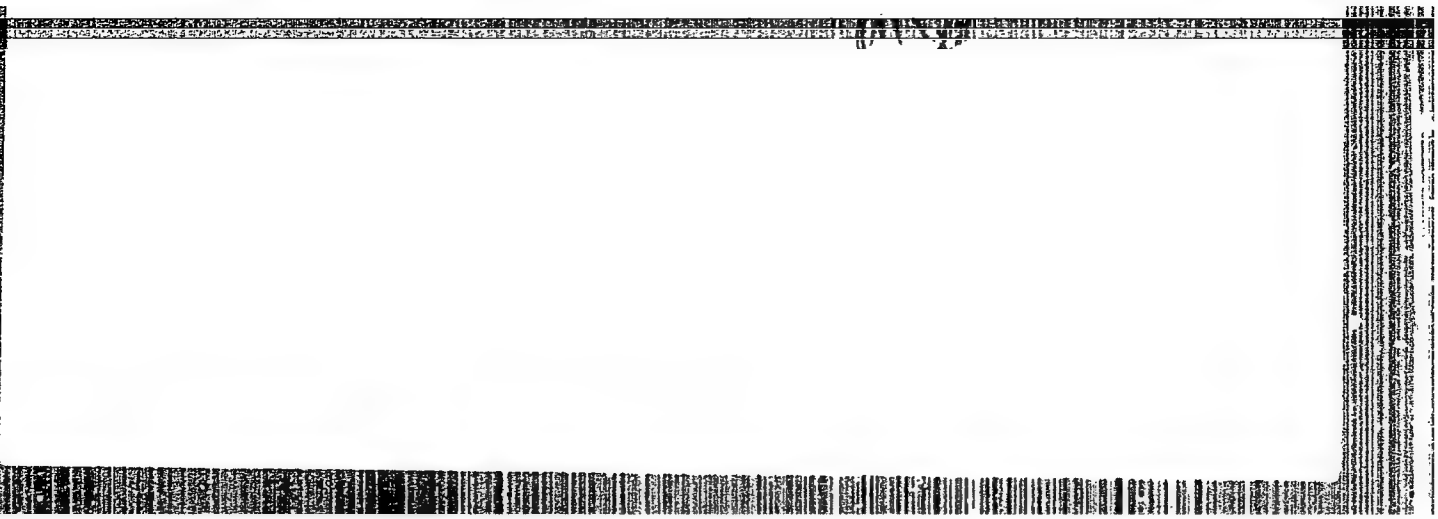

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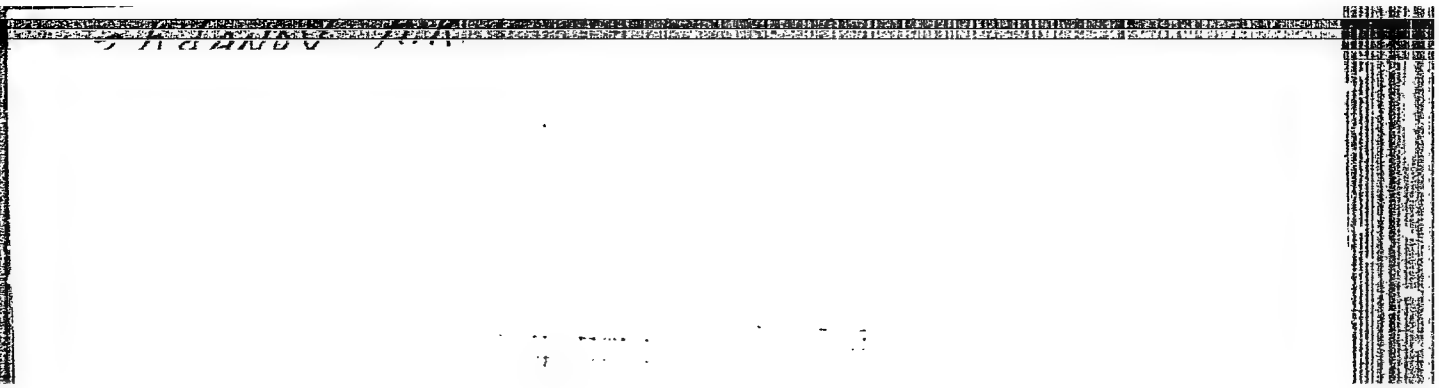

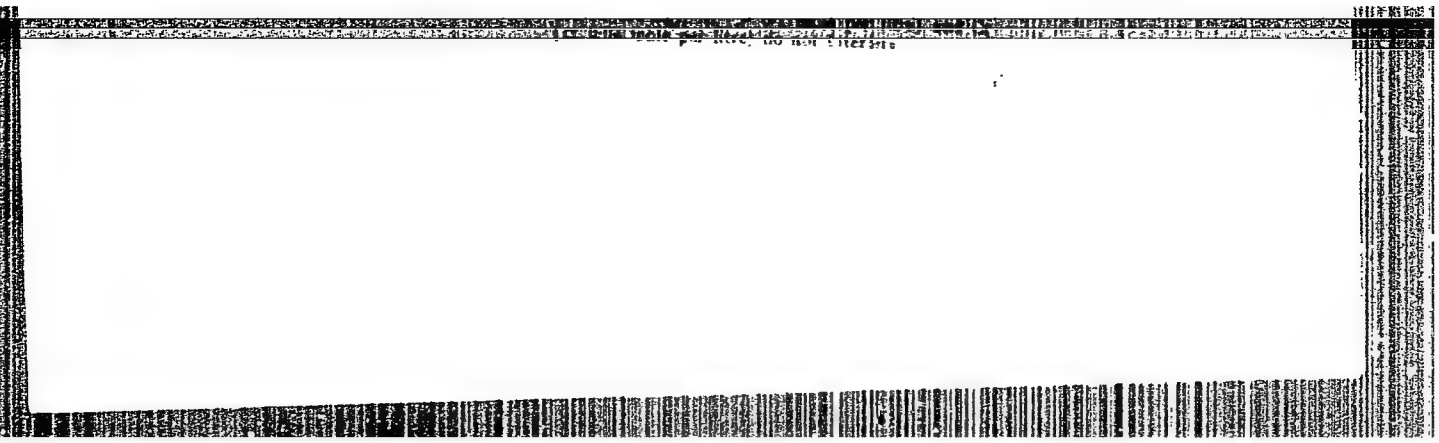

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ZHDANOV, A.K.

USSR

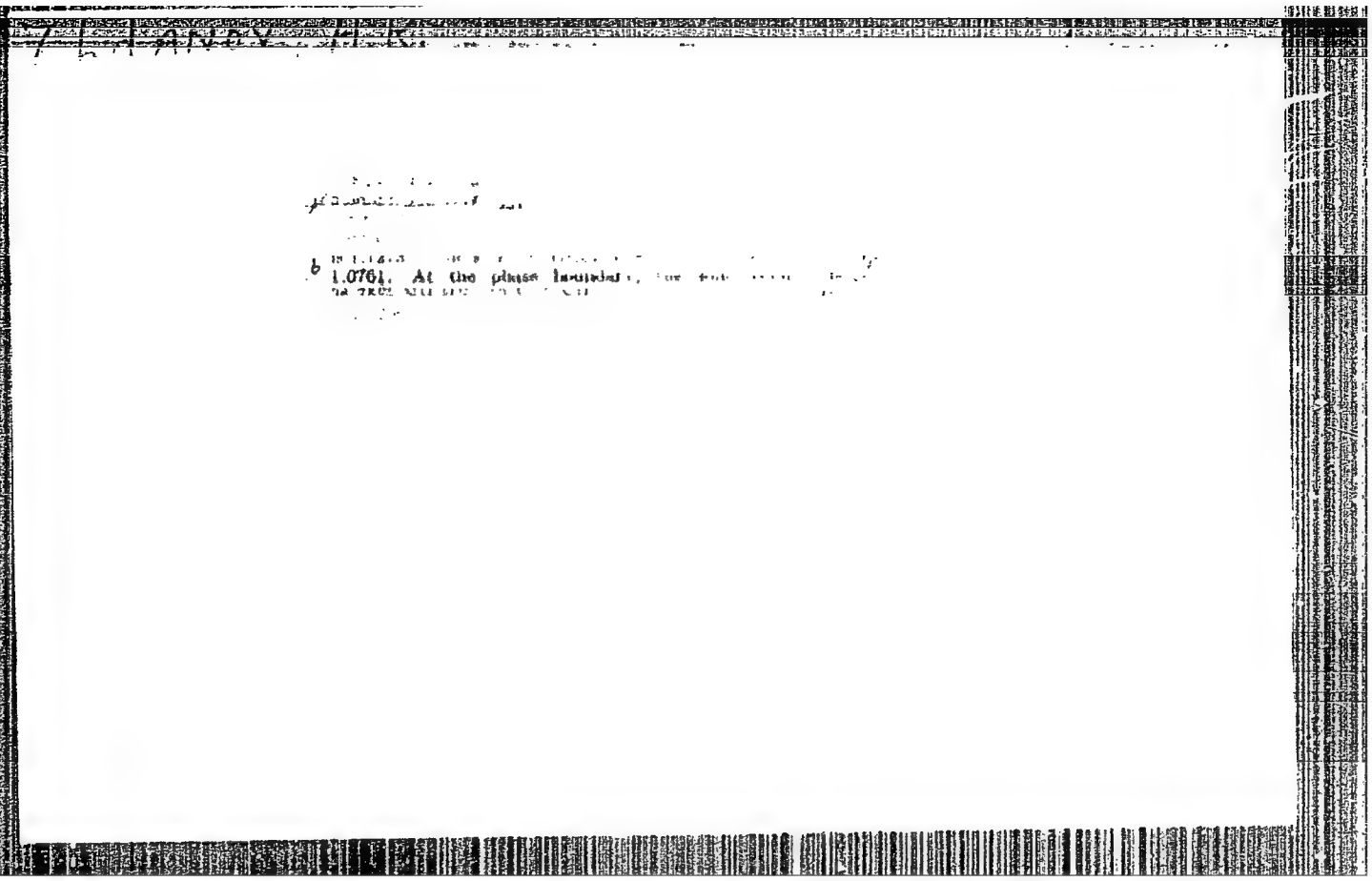
2820. Amperometric titrations with anthranilic acid. A. K. Zhdanov, R. L. Teplin and A. M. Yakubov. [illegible] 1956 21 [illegible]

Conditions for the amperometric determination of Cu, Zn, Ni and Co with 0·1 M Na anthranilate of pH 5·4 are studied. The optimum conditions are pH 4·5 to 5·6, 15 to 20 per cent [illegible] and 0·5 to 10 mg of the element [illegible] the solution for titration. For Cu a suitable supporting electrolyte is 0·1 or 1 M KNO₃ [illegible] presence of [illegible] ml of 0·6 per cent gelatin solution [illegible] the potential applied can be zero or [illegible] For Zn, Ni and [illegible] the supporting electrolyte can be [illegible] KSCN, KCl, Na₂SO₄ [illegible] Na acetate [illegible] the applied potential is [illegible] Hydrogen is used to [illegible] The results for Cu, Ni, Zn and [illegible] are satisfactory [illegible] the presence of large amounts of Mg and [illegible] Mg can be used as supporting [illegible] minimum 0·1 M causes no interference and [illegible] and [illegible] 0·04 M) causes no interference [illegible] [illegible] determination [illegible]

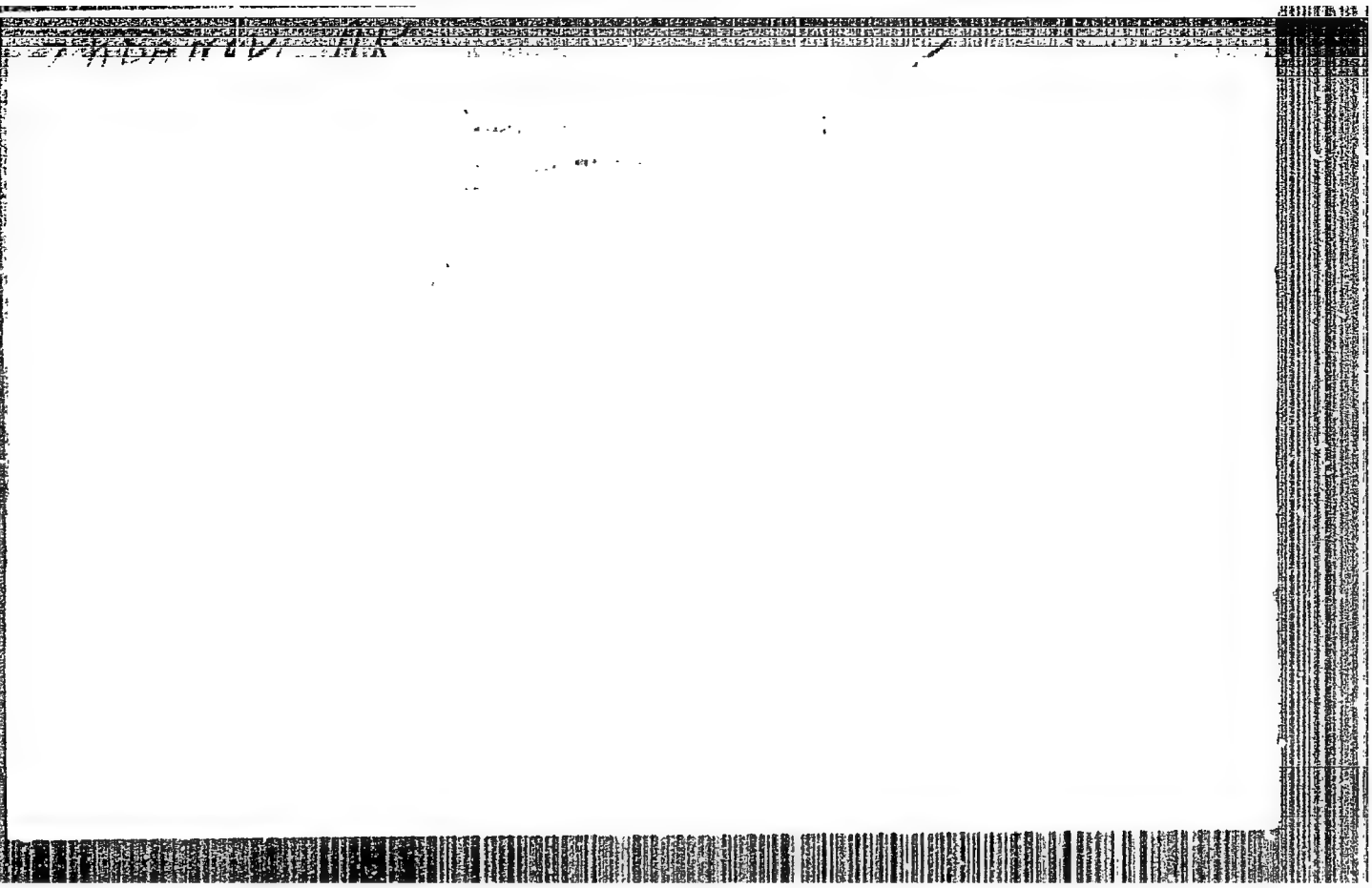
(2)

ZHDANOV, A.K.

Amperometric titration of bismuth. A. K. Zhdanov, A. Khadeev and G. P. Murtazinova (Central Asian State Univ., Tashkent). Zavodskaya Lab. 1955, ... Bi ... be titrated amperometrically ... strongly acidic soln. in the presence of excess 8-quinolinol. The method depends on formation of difficultly sol. quinolinol iodobismuthate. The titration can be ... with a dropping Hg electrode or rotating Pt electrode. SO_4^{--} and NO_3^- ions do not interfere, nor do ... ions ... 0.1M concn. ... Zn, Co, Ni, Cr, and Mn do not ... Interference by Pb is eliminated by addition ... HNO_3 and pptn. of Pb with Na_2SO_4. Cd and ... fere. Typical titration curves with clear inflection points are shown. G. M. Kosolapoff



b 1.0761. At the place indicated,



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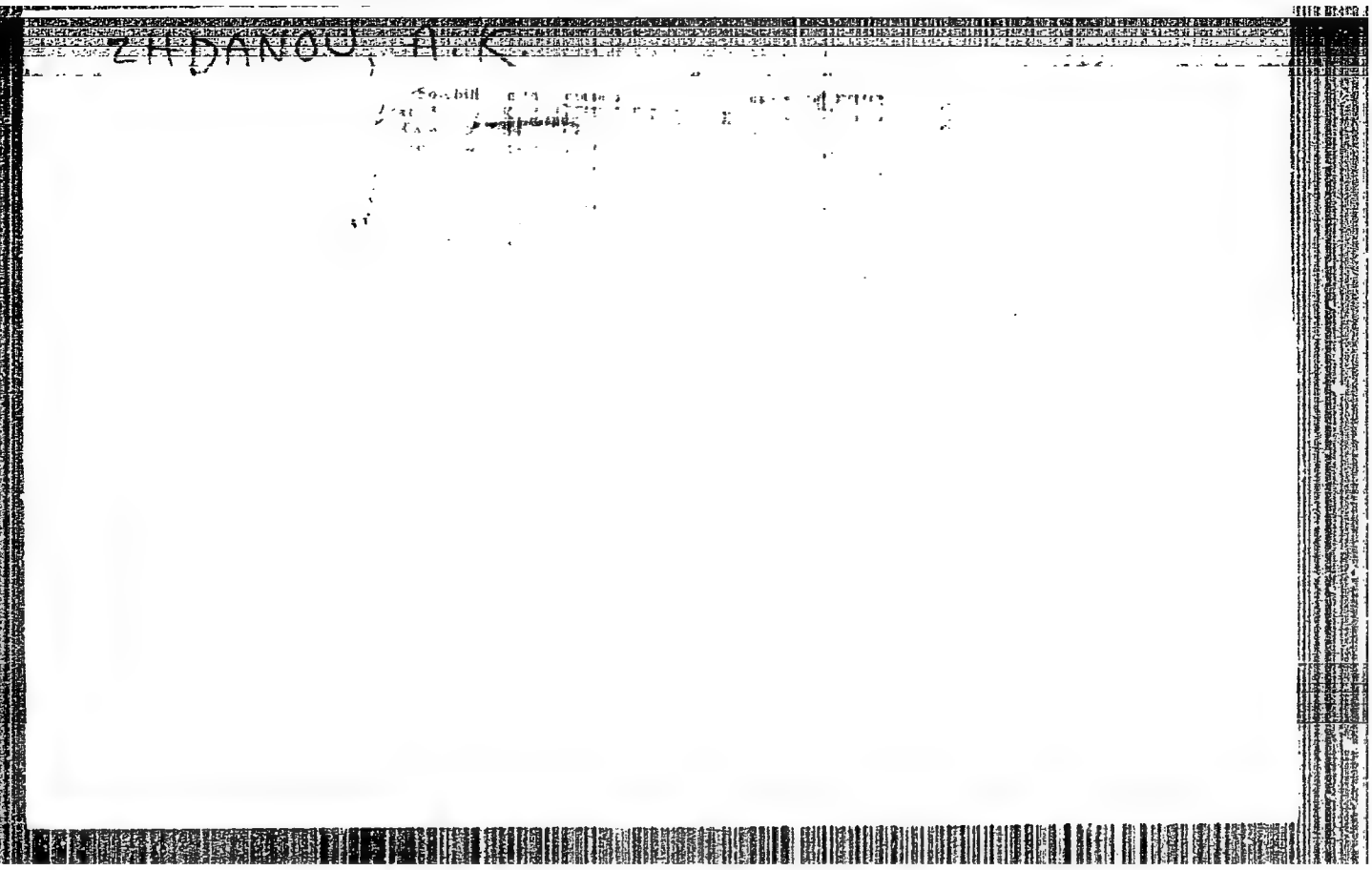

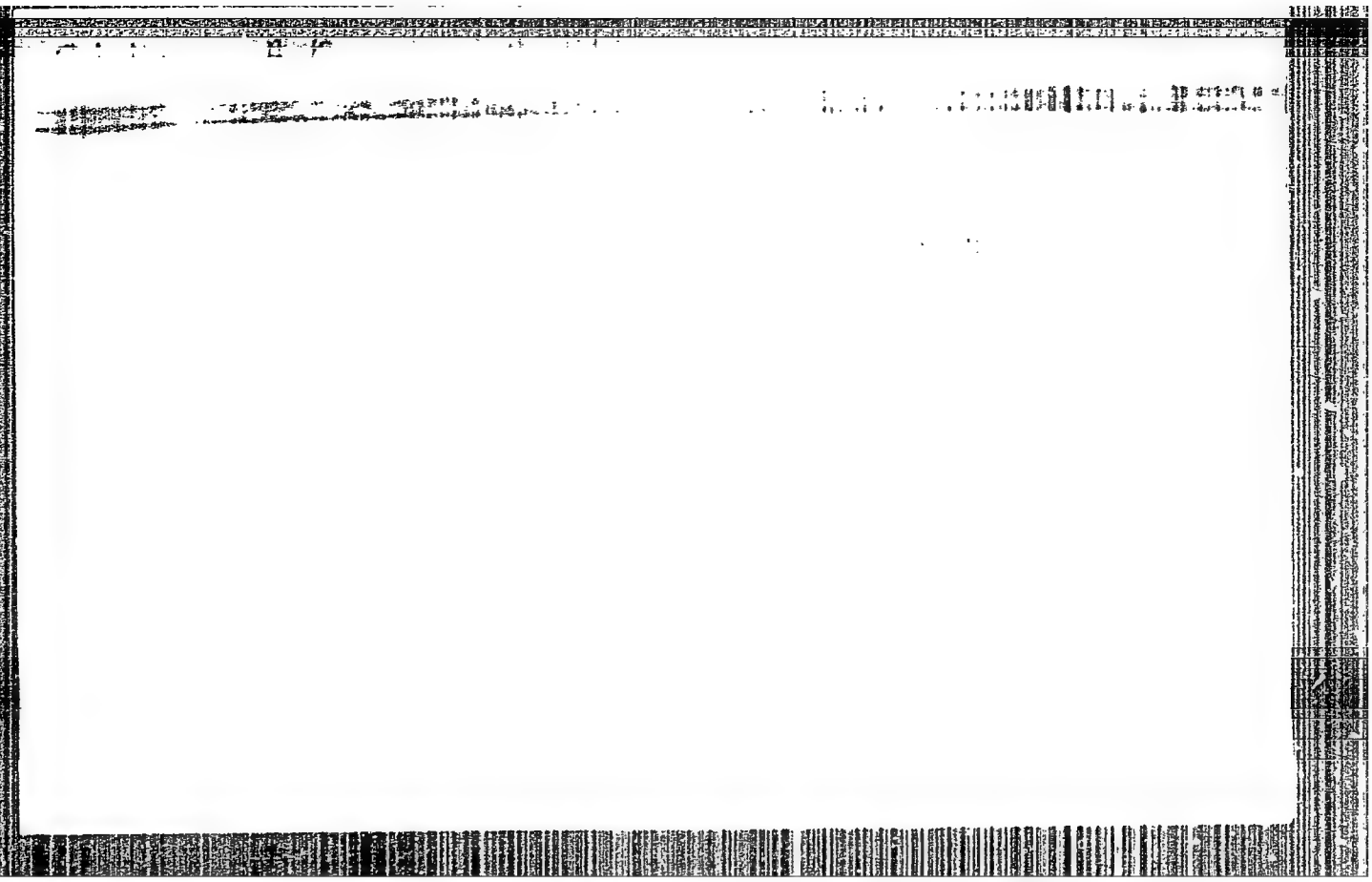

KHADEYEV, V.A.; ZHDANOV, A.K., otvetstvennyy red.; AYRAPETYAN, A., red. izd-va; BADEYAN, A., tekhn. red.

[Questions on the theory of amperometric] Nekotorye voprosy teorii amperometricheskogo metoda titrovaniia. Erevan, Izd-vo Erevanskogo univ. 1957. 177 p. (Tashkent. Universitet. Trudy Sredneaziatskogo gosudarstvennogo universiteta, no.92. Khimicheskie nauki, no.11). (Conductometric analysis) (MIRA 11:6)

AUTHOR: Zhdanov, A. K., Khadeyev, V. A., Khalilova, V. Kh. 75-6-5/23

TITLE: The Ammetric Titration of Bismuth With Potassium Iodide in the Presence of Pyramidon(Amperometricheskoye titrovaniye vismuta yodidom kaliya v prisutstvii piramidona).

PERIODICAL: Zhurnal Analiticheskoy Khimii, 1957, Vol. 12, Nr 6, pp. 695-698 (USSR)

ABSTRACT: The possibility of an ammetric titration of bismuth in strong acid solutions in the presence of surplus pyramidon with potassium iodide is shown. With this reaction a compound of bismuthine tetraiodide is formed. The titration was carried out by means of an ordinary polarograph with a dropping mercury electrode. The presence of zinc-, manganese, nickel-, cobalt-, iron-, aluminum- and magnesium-ions in the bismuth-solution to be titrated does not disturb the determination of bismuth, even if their concentration exceeds 50 to 100 times the value of the bismuth concentration. Only lead-ions act disturbingly on the titration. Even 60 times higher concentrations of sulphates, nitrates, chlorides, phosphates and acetates have no disturbing effect on the titration.

Card 1/2

The Ammetric Titration of Bismuth With Potassium Iodide in the Presence of Pyramidon 76-6-5/23

The method of titration of bismuth was also tried out with synthetic mixtures of cadmium and bismuth.
There are 4 tables, and 3 references, 3 of which are Slavic.

ASSOCIATION: Central Asian University imeni V. I. Lenin, Tashkent (Sredneaziatskiy universitet im. V. I. Lenina, Tashkent).

SUBMITTED: October 18, 1956

AVAILABLE: Library of Congress

1. Bismuth-Ammetric titration 2. Potassium iodide-Applications
3. Pyramidon-Applications

Card 2/2

Zhdanov, A.K.

AUTHORS: Khadeyev, V.A., Zhdanov, A.K. 32-11-5/60

TITLE: Determination of the Copper- and Zinc Content in Alloys by the Method of Amperometric Titration by Means of the Revolving Platinum Microelectrode (Opredeleniye medi i tsinka v splavakh metodom amperometricheskogo titrovaniya s vrashchayushchimsya platinovym mikroelektrodom)

PERIODICAL: Zavodskaya Laboratoriya, 1957, Vol. 23, Nr 11, pp. 1290-1291 (USSR)

ABSTRACT: For the determination of the copper content the reaction in the forming of thiocyanate on monovalent copper was used. For the titration of zinc the method based upon the reaction in the forming of zinc thiocyanogen mercuriate is used, which, as is mentioned here, appears possible also in the presence of other ions. As regenerator of the bivalent copper ascorbic acid was used in this case. Amperometric titration was carried out by means of a device consisting of a calomel semielement with the revolving platinum electrode. This device was connected with the solution to be titrated by means of a glass siphon, to the two ends of which two porous glass plates were fitted. The siphon was filled with saturated potassium nitrate. For the measuring of amperage a mirror galvanometer was used. The platinum electrode was driven by a motor up to 900 revolutions per minute. Before titration small doses of ascorbic acid and potassium nitrate were added, after which titration of the copper

Card 1/2

Determination of the Copper- and Zinc Content in Alloys by the Method of Amperometric Titration by Means of the Revolving Platinum Microelectrode 32-11-5/60

was carried out by a thiocyanate solution with an external voltage of 0.3 V. The reagent was then added in small doses until a constant voltage was attained. The point of equivalence was determined in the usual way. Zinc was titrated in the same manner with potassium tetrathiocyanate mercuriate, with the difference that the latter was first added in larger doses (0.3-0.5) and was added in drops as soon as the current set in. Experience has shown that titration of copper with potassium thiocyanate is impossible in the presence of bismuth. The titration of copper and zinc from a solution containing both components together was tested by means of artificially prepared mixtures of different contents. It was found that in this case errors of up to 1% are possible. There are 2 tables.

ASSOCIATION: Central Asia State University imeni V.I.Lenin (Sredneaziatskiy gosudarstvennyy universitet im. V.I. Lenin)

AVAILABLE: Library of Congress

Card 2/2

SOV/137-58-11-23808

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 11, p 276 (USSR)

AUTHORS: Zhdanov, A. K., Khadeyev, V. A., Kats, A. L.

TITLE: Amperometric Titration of Trivalent Iron With Ascorbic Acid and Sodium Versenate B (Amperometricheskoye titrovaniye trekhvalentnogo zheleza askorbinovoy kislotoy i trilonom B)

PERIODICAL: Uzb. khim. zh., 1958, Nr 1, pp 27-34

ABSTRACT: More precise procedures are given for titrating Fe^{3+} with ascorbic acid (I) and sodium versenate B (II). The experiments were carried out on an ordinary visual polarographic apparatus with a revolving Pt microelectrode. It is shown that the titration of Fe^{3+} with I can be carried out within a broad range of acidity up to pH ~ 0. The optimum concentration of acid is 0.28 - 1 mole/liter. The lowest rate at which equilibrium is attained was observed close to the point of equivalence. The presence of air O_2 has no effect on the results of titration of Fe^{3+} with I. Small amounts of Fe titrate better than large amounts. The optimum condition leading to the titration of Fe^{3+} with II is an acidity of 0.1 mole/liter HCl, overrated results are produced at a higher acidity. Titration of small amounts of Fe is best done in the presence

Card 1/2

Amperometric Titration of Trivalent Iron With Ascorbic Acid and (cont.)

of an acetate buffer. A study of the effect of foreign ions showed that the results of the titration of Fe are affected by Ni and Cu and impeded by Zn and Cd only when their amount is 10-20 times higher than the Fe contents. A comparison is made between the ascorbic acid and the chelatometric methods of the titration of Fe as to their precision, reproducibility, and selectivity, as well as speed and convenience.

Yu. B.

ZHDANOV, A.K.; ADYLOV, A.

Equilibrium in the water-ethanol-potassium fluoride system at 25°C. Ukr. khim. zhur. no. 1:35-40 '58. (MIRA 11:7)

(Ethyl alcohol)
(Potassium fluoride)
(Phase rule and equilibrium)

ZHDANOV, A.K.; YAKOVLEV, V.V.

Solubility of lead sulfate in electrolyte solutions at 25°C.
Uzb. khim. zhur. no.2:5-10 '58. (MIRA 11:8)

1.Sredneaziatskiy gos. universitet im. V.I. Lenina.
(Lead sulfate) (Solubility)

KHADEYEV, V.A.; ZHDANOV, A.K.

Amperometic titration method for determining copper and zinc in brass and bronze type alloys. Uzb. khim. zhur. no.3:57-63 '58. (MIRA 11:9)

1.Sredneaziatskiy gosudarstvennyy universitet im. V.I. Lenina.
(Copper) (Zinc) (Conductometric analysis)

5(4) SOV/75-13-6-7/21

AUTHORS: Zhdanov, A. K., Khadeyev, V. A., Mirzabekov, F. M.

TITLE: A Simplified Diaphragm Method of Internal Electrolysis (Uproshchennyy diafragmennyy metod vnutrennego elektroliza)

PERIODICAL: Zhurnal analiticheskoy khimii, 1958, Vol 13, Nr 6, pp 661-663 (USSR)

ABSTRACT: In the internal electrolysis methods with diaphragm are used very rarely since there are many apparatus necessary and the process of electrolysis requires a long time because of the high electric resistance of the electrolyzer. The authors of the present paper have devised a method with diaphragm that permits a sufficiently quick separation of medium and large quantities of metals, and thus eliminates the most considerable disadvantage of this method. In order to accelerate the separation of the metal a coarsely porous glass diaphragm Nr 1 was used, the introduction of which into the electrolyzer does not cause any considerable increase in the electric resistance. The penetration of the catholyte into the anode space is avoided by producing a slight flow of the anolyte against the catholyte. This measure is only necessary during

Card 1/3

the first 10 - 15 minutes of the electrolysis, as long as the main quantity of the metal to be determined separates from the solution. After this period a possible mixing of the solutions is no more dangerous because in view of the low concentration of the metal to be determined no cementation takes place any longer. The apparatus used are illustrated in the paper and described in detail. The operational method of this apparatus is also described in detail. As an example, copper was separated at a platinum wire-gauze cathode. Solutions of KCl and KNO_3 were used as anolytes.

It was found that the method described permits the separation of medium and even large amounts of copper. In the use of zinc or an iron anode, which is immersing into a saturated KCl solution the dissolution of the anode took place slowly and without noticeable gas formation. When using an aluminum anode, intense dissolution of the anode occurred under separation of considerable hydrogen quantities. In order to prevent the anolyte from being expelled from the anode space by the escaping gas, which would cause an interruption of the current, a spherical enlargement is provided for the reception of the

A Simplified Diaphragm Method of Internal Electrolysis SOV/75-13-6-7/21

developed gas. In further experiments it was proved that the presence of iron in the form of ferrous sulfate even in double quantity does not affect the results of copper determination. Instead of potassium chloride also other alkali metal salts can be used as anolyte. The applicability of this method was tested by analyses of copper alloys which yielded very satisfactory results. There are 1 figure, 2 tables, and 3 Soviet references.

ASSOCIATION: Sredneaziatskiy gosudarstvennyy universitet im. V. I. Lenina, Tashkent (Tashkent Central Asian State University imeni V. I. Lenin)

SUBMITTED: May 29, 1957

Card 3/3

ZHDANOV, A.K.

AUTHORS: Zhdanov, A. K., Khadeyev, V. A., Molseyeva, G. P. 32-2-4/60

TITLE: The Amperometric Titration of Cobalt With Potassium Ferric Cyanide with Rotating Micro-Platinum Electrode (Amperometricheskoye titrovaniye kobal'ta ferritsianidom kaliya na ustanovke s vrashchayushchimsya platinovym mikroelektrodom)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 2, pp. 137-140 (USSR)

ABSTRACT: The experimental conditions of the method mentioned in the title were investigated and the authors found that up to 0,1 - 0, 065 mg of cobalt can be titrated with sufficient exactness. The presence of other anions does not disturb titration, as can be seen from a table, even when it is present to the 50 - 100 fold concentration of cobalt. Also the action of other metal ions was studied and it was found that by means of the addition of tartaric acid as complex former the partial precipitation of nickel with ferric cyanide (at nickel concentrations amounting to more than the

Card 1/2

5o-fold of that of cobalt) is made impossible and that it permits the presence of an amount of copper up to 1o-times as great, as well as of an amount of iron^{3+} and chromium of up to 2o times as much. The addition of citric acid makes possible a titration in the presence of greater amounts of lead (159-fold) and bismuth (8o-fold). Sodiumsulfosalicylate proved to be a good conplex former for iron and other metals, while chromium with ammoniumpersulfate can be oxidized to dichromate, on which occasion cobalt can not be oxidized. Chromate-, as well as zinc- and cadmium ions do not disturb the cobalt titration. There are 1 figure, 3 tables, and 6 references, 3 of which are Slavic.

ASSOCIATION: Central Asian State University imeni V. I. Lenin (Sredneaziatskiy gosudarstvennyy universitet imeni V. I. Lenina)

AVAILABLE: Library of Congress

1. Cobalt-Determination 2. Potassium ferric cyanide-Applications 3. Titration

ZHDANOV, A.K.

Equilibria in the system sodium chloride - sodium bromide - water at 25o. Uzb.khim.zhur. no.5:39-44 '59.
(MIRA 13:2)

1. Sredneaziatskii gosuniversitet im. V.I.Lenina.
(Sodium chloride) (Sodium bromide)
(Phase rule and equilibrium)

ZHDANOV, A.K.; KHADEYEV, V.A.; SHAMAKHMUDOVA, T.B.

Amperometric titration of microgram amounts of copper. Zav. lab. 25 no.9:1036-1039 '59. (MIRA 13:1)

1. Sredneaziatskiy gosudarstvennyy universitet im. V.I.Lenina.
(Copper--Analysis)

ZHDANOV, A.K.

Equilibriums in the system ammonium fluoride - ammonium bromide - water at 25°. Dokl.AN Uz.SSR no.8:40-41 '59.
(MIRA 12:11)

1. Predstavleno akademikom AN UzSSR S.Yu.Yunusovym. Sredneaziatskiy gosuniversitet im. V.I.Lenina.
(Ammonium halides) (Phase rule and equilibrium)

5 (2)

AUTHORS: Zhdanov, A. K., Khadeyev, V. A., Yakovenko, G. D. SOV/75-14-3-23/29

TITLE: Ammetric Determination of Cobalt by Means of an Iodometric Method on a Rotating Platinum Micro Electrode (Amperometricheskoye opredeleniye kobal'ta yodometricheskim metodom s vrashchayushchimsya platinovym mikroelektrodom)

PERIODICAL: Zhurnal analiticheskoy khimii, 1959, Vol 14, Nr 3, pp 367-369 (USSR)

ABSTRACT: Recently (Ref 1) an iodometric method for the determination of cobalt in ammoniacal medium was suggested where no partial oxidation of cobalt by atmospheric oxygen takes place. This suggestion was further developed by the authors on the basis of a device previously described with rotating micro electrode (Ref 2) in which connection the endpoint of the titration is determined ammetrically. Since the reaction proceeds too slowly when the excess iodine is missing, iodine is added in excess and titrated back with sodium arsenite. Table 1 shows the average values of an analysis series, table 2 the small influence exercised by foreign anions and cations. There are 2 tables and 2 references, 1 of which is Soviet.

Card 1/2

Ammetric Determination of Cobalt by Means of an Iodometric Method on a Rotating Platinum Micro Electrode SOV/75-14-3-23/29

ASSOCIATION: Sredneaziatskiy gosudarstvennyy universitet im. V. I. Lenina, Tashkent (Central Asian State University imeni V. I. Lenin, Tashkent)

SUBMITTED: March 18, 1958

Card 2/2

ZHDANOV, A.K.; YATRUDAKIS, S.M.

Use of hydrogen peroxide in analytical chemistry. Part 2: Amperometric titration of manganese with hydrogen peroxide. Uzb. khim. zhur. 9 no.5:18-24 '65. (MIRA 18:12)

1. Institut khimii AN UzSSR i Tashkentskiy gosudarstvennyy universitet imeni Lenina. Submitted Sept. 29, 1964.

YATRUDAKIS, S.M.; ZHDANOV, A.K.

Hydrogen peroxide in analytical chemistry. Part 1: Amperometric titration of chromium on an apparatus with a rotating platinum electrode. Uzb.khim.zhur. 8 no.5:23-30 '64.

(MIRA 18:5)

1. Institut khimii AN UzSSR i Tashkentskiy gosudarstvennyy universitet imeni Lenina.

ZHDANOV, A.K.; KHADEYEV, V.A.; ISHANKHODZHAYEV, S.D.

Amperometric titration of bismuth by means of a complexonometric anode method employing a tantalum microelectrode. Uzb. khim. zhur. no.3:29-35 '60. (MIRA 13:10)

1. Sredneaziatskiy gosudarstvennyy universitet imeni V.I. Lenina.
(Bismuth--Analysis) (Tantalum)

ZHDANOV, A.K.; KUROCHKINA, N.A.

Quantitative determination of cerium by cathodic and anodic methods of amperometric titration by means of an apparatus having a rotating platinum microelectrode. Uzb.khim.zhur no.3:15-24 '61. MIRA 14:11)

1. Tashkentskiy gosudarstvennyy universitet imeni V.I.Lenina.
(Cerium--Analysis)
(Conductometric analysis)

ZHDANOV, A.K.; KHADEYEV, V.A.; KUBRAKOVA, A.I.; BONDARENKO, N.V.

Amperometric titration of some reducing agents by means of iodine chloride in an apparatus with a rotating platinum microelectrode. Uzb.khim.zhur. no.2:44-50 '61. (MIRA 14:10)

1. Tashkentskiy gosuniversitet imeni Lenina.
(Conductometric analysis) (Iodine chloride)

ZHDANOV, A.K.; DESYATOVA, T.A.

Amperometric titration of bismuth based on the formation of iodobismuthites in relation to the anodic current. Zhur. anal. khim. 16 no. 4:438-441 Jl-Ag '61. (MIRA 14:7)

1. V.I. Lenin Tashkent State University.
(Bismuth—Analysis) (Potassium iodide)

KHADEYEV, V.A.; ZHDANOV, A.K.; RECHKINA, L.G.

Use of chloramine-T in amperometry. Uzb. khim. zhur. no.6:28-37 '60. (MIRA 14:1)

1. Tashkentskiy gosuniversitet im. V.I.Lenina.
(Chloramine-T) (Conductometric analysis)

ZHDANOV, A.K.

Equilibrium in the system barium chloride - barium bromide - water at 25°. Dokl.AN Uz.SSR no.11:45-47 '59.
(MIRA 13:4)

1. Sredneaziatskiy gosuniversitet im. N.I.Lenina. Predstavleno akad. AN UzSSR S.Yu.Yunusovym.
(Phase rule and equilibrium) (Barium compounds)

COUNTRY : USSR
CATEGORY : Cultivated Plants. Commercial Oleiferous. Sugar-Bearing.
ABS. JOUR. : RZhBiol., No. 1, 1959, No. 1738 M
AUTHOR : Zhdanov, L.A.
INST. : All-Union Sci.Res.Inst. of Oleiferous and *
TITLE : Selection and Seed Growing of Sunflower.
ORIG. PUB. : V sb.: Kratkiy otchet o nauchno-issled. rabote Vses. n.-i. in-ta maslichn. i efiromaslichn. kul'tur za 1956 g. Krasnodar, "Kev. Kuban'", 1957, 21-30
ABSTRACT : At the Don zonal experimental selection station, Don sunflower varieties 695 and 709 in competitive variety experiments yielded by 126-130 kg/hectare more oil than the variety 8281 and by 66-62 kg/hectare more than variety 6540 of the All-Union Research Institute of Oil and Essential Oil Plants. The Don variety 695 according to data during the years 1952-1956 surpasses, under local conditions, in yield of oil the better sunflower varieties bred in other districts. Good productivity and oil-bearing characteristics for seeds of Don variety 709 and a

CARD: 1/2 *Essential Oil-Bearing Crops.

ZHDANOV, A.L., KNOROZ, V.I., kandidat tekhnicheskikh nauk; SHIENOV, A.V., kandidat tekhnicheskikh nauk.

Instrument for measuring the deformation of automobile tire tread. Avt. trakt.prom. no.6:27-28 Je '53. (MLRA 6:6)

1. Automobil'naya laboratoriya. Institut mashinovedeniya, Akademiya nauk SSSR. (Tires, Rubber)

VARSHAVSKIY, I.L.; ZHDANOV, A.L. [deceased]; LUR'YE, V.A.

Measuring consumption of gas and liquids by means of electromagnetic meters. Trudy lab.dvig. no.1:108-113 '55. (MLRA 9:9)
(Flowmeters)